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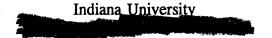
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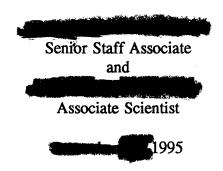
TRANSPORTATION RESEARCH CENTER



ON-SITE AIR BAG INVESTIGATION

CASE NO. - 95-17
FLEET - LEASED VEHICLE
LOCATION - TEXAS
ACCIDENT DATE 1995

Submitted By:



Contract Number: DTNH22-94-D-17058

Prepared for:

U.S. Department of Transportation National Highway Traffic Safety Administration National Center for Statistics and Analysis Washington, D.C. 20590

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The crash investigation process is an inexact science which requires that physical evidence such as skid marks, vehicular damage measurements, and occupant contact points be coupled with the investigator's expert knowledge and experience of vehicle dynamics and occupant kinematics in order to determine the pre-crash, crash, and post-crash movements of involved vehicles and occupants.

Because each crash is a unique sequence of events, generalized conclusions cannot be made concerning the crashworthiness performance of the involved vehicle(s) or their safety systems.

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pelts and dual front air bags	vestigation involving a 1994 Act	ura Vigor GS, 4-door sedan, with activ
6. Abswert This report covers an on-site inve	estigation of an air bag deployment	crash that involved a 1994 Acura Vigor C
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Vigor (case vehicle) impacted the rehicle's driver side and right-front otated approximately 15 degrees	counterclockwise after impact and ca	ame to rest approximately 5.5 meters (18 fee
Vigor (case vehicle) impacted the ehicle's driver side and right-from the otated approximately 15 degrees exest-southwest of impact heading fter impact and came to rest appraise vehicle's driver (46 year-old elt and sustained, according to let and sustained).	counterclockwise after impact and ca west-southwest. Vehicle #2 rotated proximately 9 meters (30 feet) south female) was also restrained by her a ner interview, minor injuries which	ame to rest approximately 5.5 meters (18 feet approximately 60 degrees counterclockwin west of impact heading east-southeast. To vailable, active, three-point, lap and should included: small burns to her forearms a car-old female) was not wearing her available.

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Air Bag Deployment **Injury Severity**

to her interview, a minor abrasion to her left thigh.

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TRC/IU ON-SITE AIR BAG INVESTIGATION

TRC/IU CASE NO. 95-17

FLEET - LEASED VEHICLE LOCATION - TEXAS

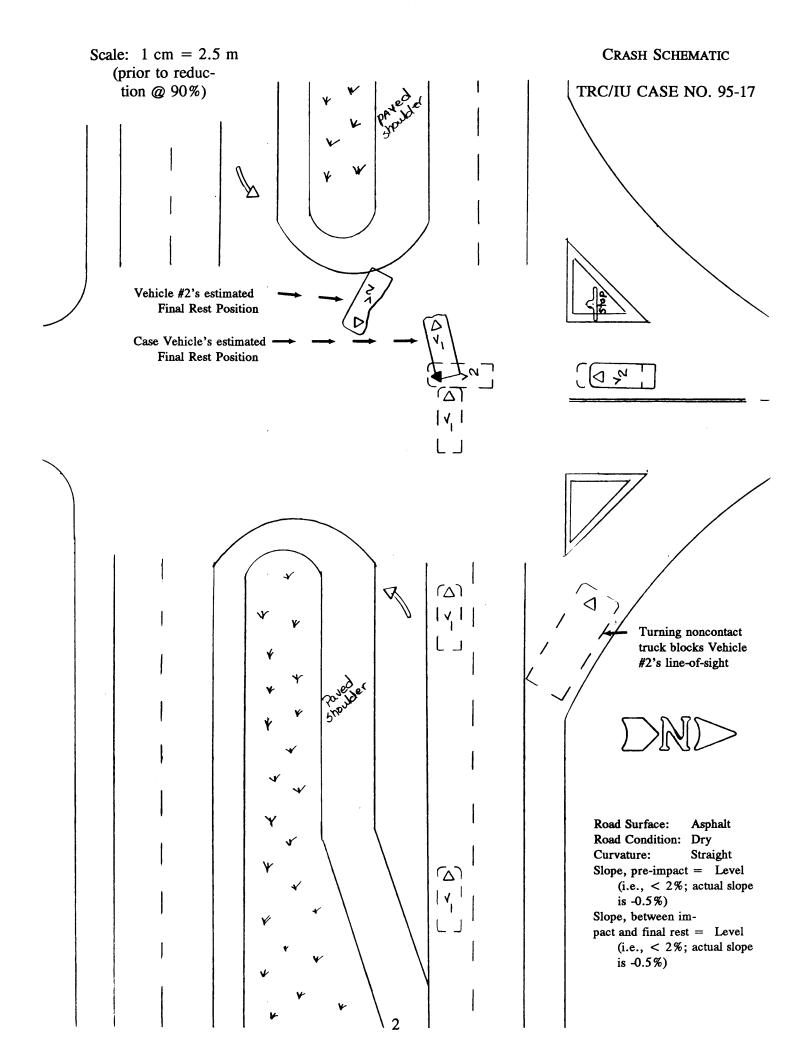
SUMMARY

This report concerns a motor vehicle crash involving an air bag equipped 1994 Acura Vigor GS, four-door sedan, and a 1985 Ford LTD, four-door sedan occurring on 1995 at 1995 at 1995 at 1995.m., in Texas on a U.S. highway. This crash is of special interest because the case vehicle's right front passenger air bag was torn during its deployment.

The Vigor was traveling west in the inside, westbound, through lane on a five-lane, divided, U.S. trafficway (i.e., two eastbound and two westbound through lanes, and one westbound left-turn lane) when it impacted the LTD which was traveling south in the southbound lane of a two-lane, undivided city roadway. The case vehicle rotated approximately 15 degrees counterclockwise after impact and came to rest approximately 5.5 meters (18 feet) west-southwest of impact heading west-southwest. Vehicle #2 rotated approximately 60 degrees counterclockwise after impact and came to rest approximately 9 meters (30 feet) southwest of impact heading east-southeast.

The front of the Vigor impacted the left front and passenger sections of the LTD. CDCs were determined to be: 01-FDEW-1 for the Vigor and 10-LYEW-3 for the LTD. The CRASHPC reconstruction program, damage only algorithm, was used on the impact (highest severity) to the Vigor. The Total, Longitudinal, and Lateral Delta Vs are respectively: 24 k.p.h. (15 m.p.h.), -22 k.p.h. (-14 m.p.h.), and -8 k.p.h. (-5 m.p.h).

The 1994 Acura Vigor GS was equipped with both driver and right-front passenger supplemental restraint systems (air bags) which deployed as a result of the frontal impact. The driver of the vehicle (46 year-old female) was also restrained by her available, active, threepoint, lap and shoulder belt. She sustained, according to her interview, minor injuries which included: small burns to her forearms and a cervical strain. The driver of the Vigor was listed on the Police Accident Report as not sustaining any injury as a result of this crash. The right front passenger (27 year-old female) in the Vigor was not wearing her available, active, threepoint, lap and shoulder belt sustaining a "B" (nonincapacitating-evident) injury. She sustained, according to the case vehicle driver (and mother), minor injuries which included: a forehead abrasion and a laceration to a left finger. The right rear passenger (78 year-old female) in the Vigor was also not wearing her available, active, three-point, lap and shoulder belt and was listed on the Police Accident Report as not sustaining any injury as a result of this crash. According to the case vehicle driver, she sustained a minor injury to her right lower leg. The driver (17 year-old female) of the LTD was restrained by her available, active, three-point, lap and shoulder belt and was listed on the Police Accident Report as not sustaining any injury as a result of this crash. According to her interview, she sustained a minor abrasion to her left thigh.



TRC/IU ON-SITE AIR BAG INVESTIGATION

TRC/IU CASE NO. 95-17

FLEET - LEASED VEHICLE LOCATION TEXAS

ACCIDENT DATA

Location/Street: U.S. Highway

City/Township: County, Texas

Area/Type: Urban, commercial

Accident Date/Time: 1995, @ _____p.m.

Investigating Police Agency: Police Department

Accident Type: Car / Car - right angle

Occupant Injury Severity

(air bag vehicle): Abrasion forehead (AIS-1)

AMBIENT CONDITIONS

Light Conditions: Daylight

Weather Condition: Clear (no clouds)

Precipitation: None

Road Surface: Dry

ROADWAY

Case Vehicle Vehicle #2

Location: U.S. highway City street

Number of Travel Lanes: Five lanes, divided; two Two lanes, undivided

> lanes eastbound, three lanes westbound--two westbound through lanes and one left-turn lane

Width: 3.4 meters (11.2 feet) 5.7 meters (18.7 feet)

Surface Type: **Asphalt** Asphalt

Median: Grass median without None positive barrier

ROADWAY (CONTINUED)

Case Vehicle

Vehicle #2

Shoulders:

Asphalt shoulders on both north and south sides of

westbound roadway

Concrete apron with curbs on north and south sides

Vertical alignment:

Level

Level

Horizontal alignment:

Straight

Straight

Estimated Coefficient of

Friction:

.75

.75

Traffic Density:

Moderate

Light

TRAFFIC CONTROLS

Case Vehicle

Vehicle #2

Signals:

None

None

Signs:

None

Regulatory STOP sign

Markings:

Solid white edge line on north side, dash white lane line between outside and inside through lanes, double solid white lane lines between inside through lane and left-turn lane, and solid yellow center line on south side

Dashed white lane line between north and south lanes until near intersection; at intersection, double solid yellow center lines

Speed Limit:

64 k.p.h. (40 m.p.h.)

48 k.p.h. (30 m.p.h.)

VEHICLES

Case Vehicle

Vehicle #2

Year:

1994

1985

Make:

Acura

Ford

Model:

Vigor GS

LTD

Body Type:

Four-door sedan; five passengers

Four-door sedan; five

passengers

V.I.N.

JH4CC2664RC-----

1FABP393XFG-----

Color:

Black

Gray

	VEHICLES (CONTINUED)	
	Case Vehicle	Vehicle #2
Mileage:	22,925 km (14,245 miles)	Unknown, odometer may have rolled over; 52,943 km (32,897 miles)
Engine:	2.5 liters, I5	3.8 liters, V6
Transmission:	4-speed automatic	Automatic, unknown speed
Steering:	Power-assisted, rack-and-pinion	Power-assisted, worm and gear
Brakes:	Power-assisted, 4-wheel disc	Power-assisted, 4-wheel drum
Padding:	Steering wheel and hub, sunvisors, dash, "A"-pillars, side door surfaces	Steering wheel, dash, sunvisors, A"-pillars, side door surfaces
Active Restraints:	3-point, manual, lap and shoulder belts in front and rear outboard seating positions; lap belt only at rear center position	3-point, manual, lap and shoulder belts in front outboard seating positions; lap belt only at rear positions
Passive Restraints:	Factory installed driver and right front passenger supplemental restraint systems (air bags)	None
Defects:	None	None
Fleet:	Leased vehicle	Private vehicle
Tow status:	Towed due to damage	Towed due to damage
	VEHICLE DAMAGE	
EXTERIOR	Case Vehicle	Vehicle #2
Deployment Impact		•
Event number:	First	First
Object Struck:	Vehicle #2	Case Vehicle
Damage location Damaged Plane:	Front	Left

Between sill and beltline

Bumper

Vertical Location On Plane:

VEHICLE DAMAGE (CONTINUED)				
EXTERIOR (Continued)	Case Vehicle	Vehicle #2		
Deployment Impact (Continued)				
Direct Begins:	9 cm (3.5 in) in- ward from left front	17 cm (6.7 in) behind left front axle		
Length Direct: Field L: C₁: C₂: C₃: C₄: C₄: C₅: C₀: D: Maximum Crush: Location:	bumper corner 140 cm (55.1 in) 162 cm (63.8 in) 26 cm (10.2 in) 18 cm (7.1 in) 17 cm (6.7 in) 13 cm (5.1 in) 11 cm (4.3 in) 9 cm (3.5 in) +7 cm (+2.8 in) 26 cm (10.2 in)	215 cm (84.6 in) 252 cm (99.2 in) 0 cm (0.0 in) 10 cm (3.9 in) 35 cm (13.8 in) 36 cm (14.2 in) 19 cm (7.5 in) 0 cm (0.0 in) +6 cm (+2.4 in) 36 cm (14.2 in)		
CDC:	C_1	C ₄		
Damaged Components:	01-FDEW-1 Front bumper, grille, hood, left and right front fenders and headlight assemblies	10-LYEW-3 Left front fender, wheel rim, and door, left rear door, and left front head-light reflectors and turn signal		
INTERIOR				
Damaged Components:	Windshield, holed	None		
Other Evidence of Occupant Contact:	Left and right dash and right glove box door	None		
Manual Restraint System Failures:	None	None		
Seat Performance Failures:	None	None		
REPAIR				
Cost Estimate:	Unknown	Totalled, Unknown		

VEHICLE VELOCITY ESTIMATES¹

Highest Delta "V"	Case Vehicle	Vehicle #2
Reconstruction Program:	CRASHPC and EDCRASH	CRASHPC and EDCRASH
Program Algorithm:	Damage only	Damage only
Travel Speed:1	52 k.p.h. (32 m.p.h.)	20 k.p.h. (12 m.p.h.)
Total Delta "V":	24 k.p.h. (15 m.p.h.)	28 k.p.h. (17 m.p.h.)
Longitudinal Delta "V":	-22 k.p.h. (-14 m.p.h.)	-10 k.p.h. (-6 m.p.h.)
Lateral Delta "V":	-8 k.p.h. (-5 m.p.h.)	+26 k.p.h. (+16 m.p.h.)

COLLISION SEQUENCE

PRE-CRASH:

According to the Police Accident Report and the case vehicle's driver, the case vehicle (Vigor) was traveling west in the inside, westbound, through lane on a five-lane, divided, U.S. trafficway (i.e., two eastbound and two westbound through lanes, and one westbound left-turn lane) and was attempting to continue in its direction of travel. According to the Police Accident Report and vehicle #2's driver, vehicle #2 (LTD) was traveling south in the southbound lane of a two-lane, undivided, city roadway and was stopped attempting to cross the westbound lanes of the divided trafficway. NOTE: Although the intersection has four legs, the southern leg is a commercial driveway. According to the driver of vehicle #2, she intended to continue straight across the eastbound roadway and enter the commercial driveway on the south leg. According to the Police Accident Report and the driver of vehicle #2, a noncontact vehicle was turning right from the westbound roadway intending to go north. According to the driver of vehicle #2, she entered the intersection and then saw the case vehicle approaching. According to the case vehicle's driver, she attempted to brake when she saw vehicle #2 stopped² in her path. The case vehicle continued essentially straight ahead prior to impact. According to the driver of vehicle #2, she attempted to accelerate². Vehicle #2 surged essentially straight ahead prior to impact. The accident occurred in the westbound roadway in the tee intersection of the two trafficways.

CRASH:

According to the vehicle inspections, the front of the case vehicle impacted the left front and passenger sections of vehicle #2 causing the case vehicle's driver side and right-front passenger side supplemental restraint systems (air bags) to deploy. The case vehicle rotated approximately 15 degrees counterclockwise after impact and came to rest approximately 5.5 meters (18 feet) west-southwest

Vehicle travel speeds at impact are between: 48-56 k.p.h. (30-35 m.p.h.) for the case vehicle, and 16-24 k.p.h. (10-15 m.p.h.) for vehicle #2; see discussion on page 31, TRC Vector Analysis Iterations.

The exact actions of vehicle #2's driver are unknown, but it is entirely possible that she started, stopped, and finally attempted to accelerate across the westbound lanes. On the other hand, the perception by the case vehicle's driver that vehicle #2 stopped in her path may have resulted from her inattention. In either case, vehicle #2 was accelerating prior to impact; see discussion on page 31, TRC Vector Analysis Iterations.

COLLISION SEQUENCE (CONTINUED)

CRASH: (Continued)

of impact heading west-southwest. Vehicle #2 rotated approximately 60 degrees counterclockwise after impact and came to rest approximately 9 meters (30 feet) southwest of impact heading east-southeast.

POST-CRASH:

Occupants:

According to the driver of the case vehicle, she remained inside the vehicle at final rest. She was conscious and able to exit the case vehicle under her own power. According to the case vehicle driver, the right front and right rear passengers also remained inside the vehicle at final rest. They were both conscious. The right front passenger was able to exit the case vehicle with some assistance; the right rear passenger was able to exit the case vehicle under her own power. According to the case vehicle's driver, she was restrained by her available, active, three-point, lap and shoulder belt; the right front and right rear passengers were not wearing their available, active, three-point, lap and shoulder belt.

Police:

The investigating police agency was notified of the crash within four minutes and arrived on-scene within six minutes. Traffic control procedures were established and emergency medical and towing services were called to assist.

Rescue:

According to the Police Accident Report, both drivers and the right rear passenger in the case vehicle refused transportation for medical treatment. According to the case vehicle's driver, she did receive medical treatment later at a physician's office. According to the Police Accident Report and the case vehicle's driver, the right front passenger was transported by ambulance to a medical facility where she was treated and released. According to the case vehicle's driver, the right rear passenger was not treated. According to our interview with the case vehicle's driver (mother of right front passenger and daughter of right rear passenger), she sustained minor injuries which included: small burns to her forearms and a cervical strain. The right front passenger sustained minor injuries which included: a forehead abrasion and a laceration to a left finger. Finally, the right rear passenger sustained a minor injury to her right lower leg. According to the driver of vehicle #2, she was restrained by her available, active, three-point, lap and shoulder belt and sustained a minor abrasion to her left thigh.

Removal:

Following the police investigation, the case vehicle and vehicle #2 were towed from the scene.

HUMAN FACTORS/OCCUPANT DATA

DRIVERS: 46 year-old female 17 year-old female
Weight: 163 cm (64 in) 160 cm (63 in)

HUMAN FACTORS/OCCUPANT DATA (CONTINUED)

DRIVERS: (Continued) Case Vehicle #2

Height: 68 kg (150 lbs) 52 kg (115 lbs)

Occupation: Student Student

Active Restraint

System/Usage: 3-point lap and shoul- 3-point lap and shoul-

der/Used der/Used

Usage Source: Vehicle inspection, Interviewee, and Police Vehicle inspection, Interviewee, and Police

Accident Report Accident Report

Passive Restraint
System/Usage: Factory installed air bag /

System/Usage: Factory installed air bag / None air bag deployed

Usage Source: Vehicle inspection, In- Not applicable

terviewee, and Police Accident Report

•

Eye glasses/contacts: Sunglasses Contacts

Vehicle Familiarity: Unknown mileage, driven 1,600 km (1,000 mi) tobetween 6-12 months tal; driven two months

Route Familiarity: Infrequently (second time Daily

ever) \

Trip Plan: Shopping to relative's Home to shopping

house

Manner of Leaving Scene: Taken by Police to hospi- Walked home

tal

Type of Medical Treatment: Treatment later Self Treatment

Right Front Right Rear

CASE VEHICLE PASSENGERS: 27 year-old female 78 year-old female

Height: 168 cm (66 in) 157 cm (62 in)

Weight: 77 kg (170 lbs) 59 kg (130 lbs)

Active Restraint

System/Usage: 3-point lap and shoul- 3-point lap and shoul-

der/Not used der/Not used

Usage Source: Vehicle inspection, In- Interviewee, Police Acci-

terviewee, Police Accident Report

Passive Restraint dent Report

System/Usage: Factory installed air bag / None
Air Bag Deployed

HUMAN FACTORS/OCCUPANT DATA (CONTINUED)

CASE VEHICLE PASSENGERS:

(Continued)

Case Vehicle

Vehicle #2

Usage Source:

Vehicle inspection, Interviewee, Police AcciNot applicable

dent Report

Eye glasses/contacts:

Sunglasses

Not applicable

Manner of Leaving Scene:

Ambulance

Taken by Police to hospi-

Type of Medical Treatment:

Treated and released

Not treated

Case Vehicle Driver Injuries ^{3,4}				
Description of Injury	<u>A.I.S.</u>	Source of Data	Injury <u>Mechanism</u>	<u>Certainty</u>
Burns, small, to both forearms	792000.1,3	74	Air bag driver's side exhaust gases	{Probable}
Cervical strain ³	640278.1,6	74	Air bag driver's side	{Possible}

Case Vehicle Right Front Passenger Injuries ³				
Description of Injury	<u>A.I.S.</u>	Source of Data	Injury <u>Mechanism</u>	<u>Certainty</u>
Abrasion forehead Laceration left finger, not further specified	190202.1,7 790600.1,2	74 74	Windshield Windshield	{Certain} {Probable}

Case Vehicle Right Rear Passenger Injuries				
Description of Injury	<u>A.I.S.</u>	Source of Data	Injury <u>Mechanism</u>	<u>Certainty</u>
Injured right calf	890099.1,1	7	Interior surface of right rear door	{Possible}

The case vehicle driver indicated that her doctor told her she had a strained vertebral ligament. Because of the lack of medical records, the injury description coded is a "best fit".

The husband of the case vehicle driver and father of the right front passenger did not provide the signed medical releases needed to acquire these occupants medical records.

	VEHICLE #2 DRIVER INJURIES			
Description of Injury	<u>A.I.S.</u>	Source of Data	Injury <u>Mechanism</u>	<u>Certainty</u>
Abrasion left thigh	890202.1,2	7	Steering wheel rim	{Probable}

DRIVER KINEMATICS

According to the case vehicle's driver, her initial posture just prior to the impact was: sitting upright with her back against the seatback, either her left foot on the floor and her right foot on the brake or both feet on the brake, and both hands on the steering wheel. The vehicle inspection revealed the seat track was set all the way rearward with the seatback in the slightly reclined position. According to the case vehicle driver her seat track position normally is set midway between the forward and middle positions. It is most likely that the driver's seat was moved backwards during the removal of the driver and passenger air bags. According to the case vehicle's driver, she attempted to brake immediately prior to impact and most likely move forward toward the steering wheel.

Based on the interview with the case vehicle's driver and occupant kinematic principles, the case vehicle's impact sent her forward and most likely to the right causing her to load her available, active, three-point, lap and shoulder belt. The driver stated that her belts locked-up holding her back from absorbing the full force of her deploying air bag. The inspection of the driver's air bag revealed a lipstick mark.

Based on the driver's interview and the crash dynamics, the impact with vehicle #2 caused the front end of the case vehicle to rotate approximately 15 degrees counterclockwise. At final rest the case vehicle remained in the inside westbound lane heading west-southwest. According to the driver, at final rest, she was essentially in the same seating position as she was prior to the crash due to her usage of her lap and shoulder belt.

RIGHT FRONT PASSENGER KINEMATICS

According to the case vehicle's driver and mother of the right front passenger, her daughter's posture immediately prior to the crash was most likely: leaning forward with both feet on the floor and both hands on the dash in front of her bracing for the impending crash. The vehicle inspection showed that the position of the seat track was between the middle and rear positions with the seatback slightly reclined. The driver also confirmed that the seat was similarly positioned at the time of the crash.

Based on the interview with the case vehicle's driver and occupant kinematic principles, the case vehicle's impact with vehicle #2 caused the right front passenger to move forward, upward, and to her right. The vehicle inspection indicated that the right front passenger contacted and holed the windshield with her head causing, according to the interview with the case vehicle's driver, only a abrasion to her daughter's forehead and a laceration to her left finger. According to the interviewee and the Police Accident Report, the right front occupant was not wearing her available, active, three-point lap and shoulder restraint at the time of impact. The case vehicle's

RIGHT FRONT PASSENGER KINEMATICS (CONTINUED)

driver (mother) indicated that the sunglasses her daughter was wearing, were found on the roadway in front of the case vehicle at final rest. This passenger's right front air bag failed to fully because of an extensive tear the air bag sustained during the deployment. The tear to the air bag occurred during its deployment when the bag's material snagged the mounting screws on the inflator module; see SELECTED PHOTOGRAPHS #49 through #57. The air bag also sustained a few other cuts which were caused from the windshield glass.

Based on the crash dynamics, the right front passenger most likely rebounded rearward after striking the windshield. Her exact position at final rest is unknown, but the case vehicle driver indicated that she was able to exit the case vehicle with some assistance.

RIGHT REAR PASSENGER KINEMATICS

According to the case vehicle's driver and daughter of the rear seated passenger, her mother's posture immediately prior to the crash is not known for sure, but she was believed to be: sitting upright with both feet on the floor and both hands on the seat in front of her bracing for the impending crash. According to the case vehicle's driver, this occupant was seated behind the driver (i.e., position "21"); however, contact evidence observed during the vehicle inspection indicates that she was seated behind the right front passenger (i.e., position "23"). The vehicle inspection determined that the rear bench seat was fixed and not adjustable.

Based on the interview with the case vehicle's driver and occupant kinematic principles, the case vehicle's impact with vehicle #2 caused the driver's mother to move forward and to her right contacting the back of the right front seatback with her knees. According to the case vehicle's driver, her mother sustained only an injury to her right lower leg (calf), most likely from contacting the right rear door's interior surface.

According to the driver, her mother was thrown across the rear seat and ended up on the right side at final rest laying on her side. This reported posture at final rest is not inconsistent with this contractor's believed seating location. According to the driver the rear passenger was not wearing her available, active, three-point lap and shoulder belt. According to the Police Accident Report, the rear seated passenger was wearing only the lap portion of her lap and shoulder belt.

	AIR BAG SYSTEM	
	DRIVER AIR BAG	PASSENGER AIR BAG
Air Bag Diameter (seam-to-seam, deflated):	63 cm (24.8 in) longitudinally; 67 cm (26.4 in) vertically	60 cm (23.6 in) longitudinally
Number of Vent Holes:	Two	Two
Vent Hole Diameter:	3 cm (1.2 in)	9 cm (3.5 in)

AIR BAG SYSTEM (CONTINUED)

DRIVER AIR BAG

PASSENGER AIR BAG

Vent Hole Clock Positions:

One and eleven o'clock

Three and nine o'clock

Generant Residue:

No unusual amount found

No unusual amount found

DISCUSSION

Although the exact nature and extent of the injuries sustained by the case vehicle's right front passenger are unknown, it does not appear that she was severely injured during this crash. If her right front air bag had properly deployed, given her position on top of the air bag module because of the nonuse of her available restraints, then it is most likely that she would have been severely injured by her deploying right front air bag.

ACCIDENT COLLISION MEASUREMENT TABLE

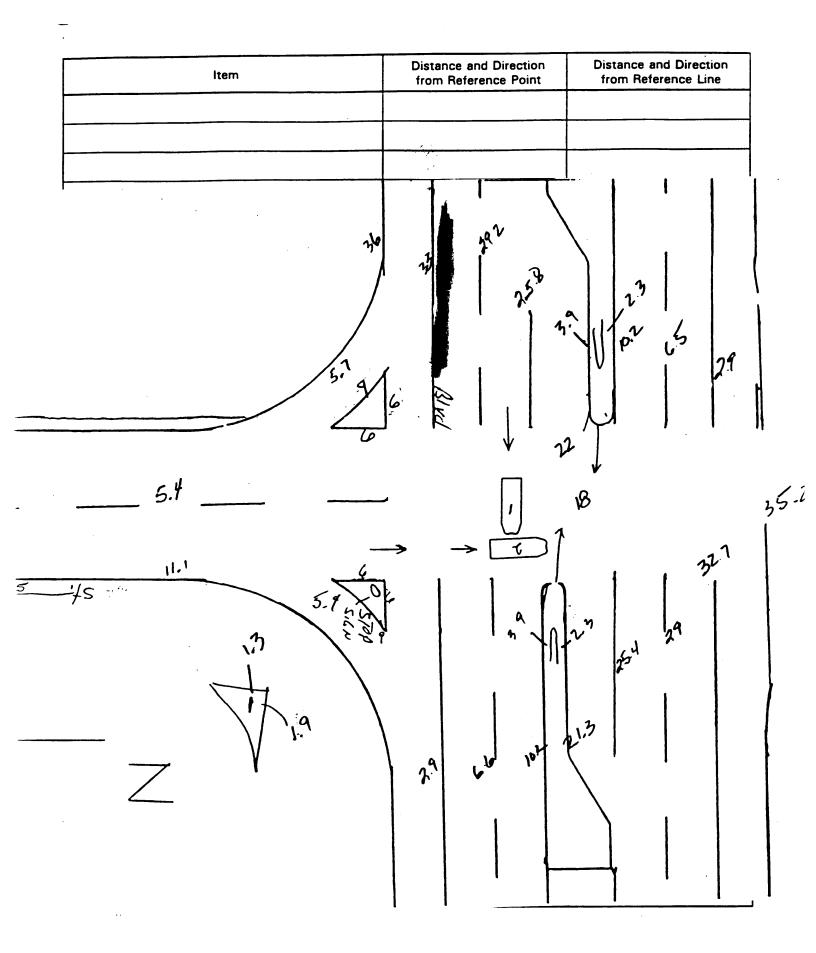


U.S. Department of Transportation National Highway Traffic Safety Administration

ACCIDENT COLLISION MEASUREMENT TABLE

NATIONAL ACCIDENT SAMPLING SYSTEM CRASHWORTHINESS DATA SYSTEM

Primary Sampling Unit Number	0	Case N	lumber –	-Stratum <u>9 5 1 7</u>
ACCIDENT COL	LISION DIAGRAM			
Document the physical plant: all road/roadway delineation (e.g., curbs/edge lines, lane markings, median markings, pavement markings, parked vehicles, poles, signs, etc.) all traffic controls (e.g., speed limit) north arrow placed on diagram roadway surface type and condition of applicable roadways grade measurements for all applicable roadways and at location of rollover initiation roadway curvature	Document vehicle reference point to physical fear scaled docume induced physical earlier contact scaled represer pre-impact, impupon either: a) physical earlier contact of the contac	ntation of all roadside	Surface Surface Condition Coefficien Friction Grade (v. Measure	ent of //h) -/4/8 en impact
			Grade (v Measure (at locat rollover	ement
Reference Point:		Reference line:		
ltem		Distance and Direct from Reference P		Distance and Direction from Reference Line
NO EVIDENCE				
•				
		-		



Appendix A:

POLICE ACCIDENT REPORT

TEXAS PEACE OFFICER'S ACCIDENT REPORT	ST-3 (Eff. 9/2/93) MAIL TO: ST	ATISTICAL SERVICES, TEXAS DEP	ARTMENT OF PUBLIC SAFETY	X
PLACE WHERE ACCIDENT OCCURRED		State of the state		LOC. NO.
IF ACCIDENT WAS OUTSIDE CITY LIMITS. INDICATE DISTANCE FROM NEAREST TOWN	CITY OR TO		FINSIDE CITY LIMITS	DO NOT WRITE IN THIS SPACE
		***************************************	CITY ON YORK	DPS NO
ROAD ON WHICH ACCIDENT OCCURRED INTERSECTING STREET ROCK NUMBER	STREET OR ROAD NAME	ABER OR STREET CODE CON	ISTR. : YES SPEED	CODE SEVERITY
OR RR X'ING NUMBER SLOCK NUMBER NOT AT INTERSECTION	FT TOTAL OF	ABER OR STREET CODE		TYPE
DATE OF		OR NEAREST INTERSECTING NUMBERED HIGHT EAREST INTERSECTING STREET OR REFERENC		FAT. REC DR. REC
ACCIDENT	19 25 WEEK	HOUR	P.M. OR MIDNIGHT, SO STATE	= VAN OR BUS.
NO. 1 - MOTOR VEHICLE	VEH IDENT NO SH4		INDICATE SEATI	NG CAPACITY
MODEL 1974 & MAKE BAGE	HUNDA NAME ACURA	STYLE 40		STATE
CHIVER'S	C DOB	RACE _ CITY SEX _	F OCCUPATION STU	lent
SPECIMEN TAKEN (ALCOHOL/DRUG ANALYSI 1-BREATH 2-BLOOD 3-OTHER 4-NONE 5-	CLASS. TYPE 46	SIS RESULT	PEACE OFFICER, EMS D FIRE FIGHTER ON EMER	
OWNER &	Pust,		City	T×,
LIABILITY XYES INSURANCE NO	DILOCE COLUMN STRE	POLICY VOMEC	VEHICLE DAM	AGE RATING <u>F0-3</u>
UNIT MOTOR VEHICLE X TRAIN PED NO. 2 TOWED PEDESTRIAN OTHER	ALCYCLIST VEH IDENT NO 1FA	BP393X FG		= VAN OR BUS. NG CAPACITY
MODEL 1985 COLOR GRAY	FURD MODEL LTD	BODY 4 d		
DRIVER'S NAME DRIVER'S	m modf.	EIII	PHONE NUMBER	
SPECIMEN TAKEN (ALCOHOL/DRUG ANALYSI	CLASS/TYPE 17	YEAR RACE W SEX	OCCUPATION STU	<u> </u>
1-BREATH 2-BLOOD 3-OTHER 4-MONE 5- LESSEE OWNER X		SIS RESULT	FIRE FIGHTER ON EMER	
LIABILITY X YES	GINERALISE SHOW OF VENI	ADORESS	CITY	3MF2 < Δ /
	OLLINE COUNCIL NAME	POLICY NUMBER	VEHICLE DAM	AGE RATING LP. 3
DAMAGE TO PROPERTY OTHER THAN VEHICL	£ 3			
OBLICT .	NAME AND ADDRESS OF OWNER		FEET FROM CURB	JAMAGE ESTIMATE
CONDITION (WEATHER	SURFACE	TYPE ROAD SURFACE 1-BLACKTOP	DESCRIBE ROAD CONDITIONS (IN	/ESTIGATOR'S OPINION)
1-DAYLIGHT 1-CLEAR/CLOUDY 2-DAWN 2-RAINING	6-SMOKE 1-DRY 7-SLEETING 2-WET	2-CONCRETE 3-GRAVEL	- Tood	
3-DARK-NOT LIGHTED 3-SNOWING 4-DARK-LIGHTED 4-FOG 5-DUSK 5-BLOWING DUST	8-HIGH WINDS 3-MUDDY 9-OTHER 4-SNOWY/ICY 5-OTHER	4-SHELL 5-DIRT 6-OTHER	!	
IN YOUR OPINION. DID THIS ACCIDE	ENT RESULT IN AT LEAST \$500.00	DAMAGE TO ANY ONE PER	RSON'S PROPERTY?	res no
CHARGES FILED NAME	CHARGI		CITA NUM	
NAME	CHARGE		CITA NUM	TION
OF ACCIDENT 95	P M HOW Distate.	Hed	TIME ARRIVED AT SCENE OF ACCIDENT	95 P M
TYPED OR PRINTED NAME OF INVESTIGATOR		DATE REPOR		ORT COMPLETE XYES NO
SIGNATURE OF INVESTIGATURY		ID NO.	EPARTMENT OF THE PARTMENT OF	DIST. / AREA

EJECTED		CODE FOR TY	PE RESTRAINT USED	AIRBAG COO	DE	HELMET U	38	CODE F	OR INJURY S	SEVERITY	tca			/DRUG			(MICLE)
A - NOT APPLIC Y - YES N - NO P - PARTIALLY U - UNK	NO C - CHILD RESTRAINT U - UNK IF DEPLOYED 3 - WORN-UNK IF DAMAGED 8 - NON INCAPACITATING 3 - OTHER PARTIALLY E - SHOULDER STRAP ONLY 4 - NOT WORN C - POSSIBLE INJURY 4 - NOTE																
UNIT NO. 1 DAMAGE FD. 3 VES NO BY WROCKER SERVICE																	
OCCUPANT'S IT	OMPLETE AL	L DATA ON ALL	YES NO 8Y Occupants names. W addresses unles	POSITIONS, RESTRAINT S KILLED OR INJURED.			CUICC				FIECIES	TYPE		& HELMET	AGE	SEX	INJURY
POSITION	SEE FRONT	NAME (LÁST NA	ME FIRST)			SANDOA	S				N	USED A	 	+-	4/	F	€ C00€
FR	, <u></u>	,		Σ		***************************************			TX		N	N	Ý	上	21	Ë	3
157		,						TX.			M	B	-	+	78	F	N
																-	
	WAS A MOTO		VED DUE VEHICL	.E ED TO		Service CKER S	Cont	lex									
ANTING	Nel ETE AL		YES ' NO BY	POSITIONS, RESTRAINT			CRUICE	ε				TYPE	_				
OCCUPANT'S IT	IS NOT NEC	ESSARY TO SHO NAME (LAST NA	W ADDRESSES UNLES	S KILLED OR INJURED.	3 03LD. E	ADDRES:	S				CICIO			GHELMET	AGE	SEX	CODE
DRIVER	SEE FRONT										N	A			17	F	N
 					 	· · · · · · · · · · · · · · · · · · ·					\vdash	-	+	-	H		
COMPLETE IF CAS	SUALTIES NO	T IN MOTOR VEH	IICLE			· · · · · · · · · · · · · · · · · · ·					<u> </u>	<u> </u>			Ш		<u> </u>
PEDESTRIAN, PEDALCYCLIST			IE (LAST NAME FIRST	1	CASU	JALTY ADDRESS		,		TYPE		SULT	HELMI	ET AG	32 3		NJURY
EIC	-		1000							TAKEN		300		-	-		CODE
	-														+	+	
DISPOSITION OF	KILLED AND	INJURED					<u>. </u>							CE USEO			
ITEM NUMBERS			TAKEN TO				BY /				TIME DTIFIED		E ARRI T SCEN		NO. AT	DRIY	
1,3,6	Resi	ised Ti	Reatment	716		_74/	nbulga	UCC							d		
COMPLETE THIS S			1								1						
THE HOME		ALE OF DEATH	TIME OF DEATH	ITEM NUMBER	-	ATE OF DEATH	TIME OF	DEATH	ITEM NU	JMBER	BA	NTE OF (DEATH	+	IME O	DEJ	TAH .
Westigator's MARRATIVE OPINION OF WHAT HAPPENED (ATTACH ADDITIONAL SHEETS IF NECESSARY) UNIT ONC WAS West Bound in the Block of Block of Block of SIVE IN THE BOUNT IN THE BLOCK OF ST. HT. UNIT TWO WAY ! DIVIDED DIAGRAM! ON CHAPTER HORTH DIAGRAM! ONE HORTH HORTH DIAGRAM! ON CHAPTER HORTH A THACHED A THACHED TWO WAY ! DIVIDED DIAGRAM! ON CHAPTER HORTH DIAGRAM! ON CHAPTER HORTH A THACHED A THACHED ST BLOCKED HOR VIEW.																	
FACTORS AND CO FACTORS/COL UNIT 1			J J	OTHER FACTORS/OR MAY NOT HAVE UNIT 1 1 UNIT 2 1		UTED	0-MO CONTRO! 1-OFFICER OR 2-STOP AND 6 3-STOP SIGN 4-FLASHING R	FLAGMAN SIGNAL	6-1 7-1 8-1	TRAFFIC TURN MARKS WARNING SIG RR GATES OR VIELD SIGN CENTER STRI	SH SIGNAL	s		ASSING 20 R CONTRO	n 	[.	3
1 ANIMAL ON ROAD — ODMESTIC 2 ANIMAL ON ROAD — ODMESTIC 3 PAILED TO TIELD ROW — TURNING LEFT 3 FAILED TO TIELD ROW — TURNING LEFT 4 CHANGED LAME WHEN UMSAFE 4 CHANGED LAME WHEN UMSAFE 5 TABLED TO CONTROL SPEED 6 SEFECTIVE OR NO HARDLAMPS 7 FAILED TO GIVE HALF OF ROADWAY 7 DEFECTIVE OR NO STOP LAMPS 7 FAILED TO GIVE HALF OF ROADWAY 7 DEFECTIVE OR NO STOP LAMPS 7 FAILED TO THE OWN MINING SIGN 8 OFFECTIVE OR NO TAIL LAMPS 7 FAILED TO THE OWN MINING SIGN 8 OFFECTIVE OR NO TAIL LAMPS 9 FAILED TO THE OWN MINING SIGN 1 DEFECTIVE OR NO TRAILER RRAKES 1 FAILED TO PASS TO RIGHT SAFELY 1 DEFECTIVE OR NO TRAILER RRAKES 1 FAILED TO PASS TO RIGHT SAFELY 4 SHAD BEEN ORIMINED 1 DEFECTIVE OR NO TRAILER RRAKES 2 FAILED TO STOP AND SAFELY 4 SHAD BEEN ORIMINED 1 DEFECTIVE OR NO TRAILER RRAKES 2 FAILED TO STOP AND SAFELY 4 SHAD BEEN ORIMINED 1 DEFECTIVE OR NO TRAILER RRAKES 2 FAILED TO STOP AND SAFELY 4 SHAD BEEN ORIMINED 1 DEFECTIVE OR NO TRAILER RRAKES 2 FAILED TO STOP AND SAFELY 4 SHAD BEEN ORIMINED 1 DEFECTIVE THAL CARRED 1 DEFECTIVE THAL CARRED 2 FAILED TO STOP FOR SCHOOL BUS 4 IMPARTED VISIBILITY (EXPLAIM IN MARRATIVE) 4 DEFECTIVE TRAILER MICH 2 FAILED TO STOP FOR TRAIN 2 FAILED TO STOP FOR TRAIN 3 FAILED TO STOP FOR TRAIN 4 FAILED TO STOP FOR TRAIN 5 DEFECTIVE TRAILER MICH 5 UNDER INFLUENCE — DAUG 6 DEFECTIVE TRAILER MICH 5 UNDER INFLUENCE — DAUG 6 DEFECTIVE TRAILER MICH 5 UNDER INFLUENCE — DAUG 6 DEFECTIVE TRAILER MICH 6 STARLED TO VIELD ROW — OFFEN THE SECTION 7 UNDER SECTION WAT FORWARD AND 8 FAILED TO VIELD ROW — OFFEN THE SECTION 8 UNDER SECTION WAT FOR WAT FOLD WAT FOR THE SECTION 9 WRONG SIGN AT CONSTRUCTION 9 FAILED TO VIELD ROW — FIVE FOR THE SECTION 10 DEFECTIVE TRAILER MICH 1 DEFECTIVE TRAILER MICH 1 DEFECTIVE TRAILER MICH 2 FAILED TO VIELD ROW — OFFEN THE SECTION 3 PARKED AND FAILED TO SET BRAKES 1 UNDER SECTION WAT FOR WAT FOR THE SECTION 1 WROAD SECLAR PROPRICE TO M																	

TEXAS PEACE OFFICER'S ACCIDENT REPORT	ST-3 (EII. 9/2/93) MAIL TO: STATISTICAL SERVICES, T	EXAS DEPARTMENT OF PUBLIC SAFETY, -PUB	TX:
PLACE WHERE ACCIDENT OCCURRED COUNTY	CITY OR TOWN		LOC. NO.
IF ACCIDENT WAS OUTSIDE CITY LIMITS, INDICATE DISTANCE FROM NEAREST TOWN		CILL ON LOWN.	DO NOT WRITE IN THIS SPACE
ROAD ON WHICH ACCIDENT OCCURRED INTERSECTING STREET OR RR X'ING NUMBER BLOCK NUMBER	STATEST OR MOAD NAME STATEST OR MOAD NAME STATEST OR MOAD NAME ADUSE NUMBER OR STREET CODE	CONSTR. L.) YES SPEED 40 ZONE 54 NO LIMIT 40 CONSTR. L.) YES SPEED 30 ZONE 54 NO LIMIT 30	LOC SEVERITY
NOT AT INTERSECTION	I I FT. OF I MI. N S E W ENOW: SHOW MEARET INTERSECTING HUM I MONE, SHOW MEARET INTERSECTING STREET	STEES RIGHWAY	TYPE
DATE OF	The same of the sa		FAT. REC DR. REG
ACCIDENT	19 95 DAY OF WEEK HOUR	A.M. IF EXACTLY NOON DEPARTMENT, SO STATE	
	—————————————————————————————————————)	· · · · · · · · · · · · · · · · · · ·
	Signal Si		
Z			
CHARGES FILED		CITAT	ION
NAME	CHARGE	NUM CITAT	BER
TIME NOTIFIED	CHARGE	NUM	BER
OF ACCIDENT	P M HOW DISPATCHED	TIME ARRIVED AT SCENE OF ACCIDENT	5 P M
TYPED OR PRINTED NAME OF INVESTIGATOR SIGNATURE OF INVESTIGATOR	DAT	TE REPORT MADE	IRT COMPLETE (X YES NO
	— 		

Appendix B:

RECONSTRUCTION PROGRAM RESULTS:

CRASHPC (DAMAGE ONLY ALGORITHM)

CRASHPC (BARRIER OPTION--CASE VEHICLE AND VEHICLE #2)

EDCRASH (DAMAGE ONLY ALGORITHM)

TRC VECTOR ANALYSIS ITERATIONS

CRASHPC

(DAMAGE ONLY ALGORITHM)



U.S. Department of Transportation

CRASHPC PROGRAM SUMMARY

National	Highway	Traffic	Safety
A	4:		

(All Measurements in Metric)

NATIONAL ACCIDENT SAMPLING SYSTEM

Administration				CHASHWORTHINES:	S DATA SYSTEM
Identifying Title	9517) /		
Primary Sampling Unit	Case NoStratum		ent Event ence No.	Date (Month, day, year) of Ru	n
CRASHPC Vehicle Id	lentification	1	4.7		
Vehicle 1	1994	HCUR,	$\frac{A}{}$ $\frac{V_{10}}{}$	sor GS	<u> </u>
Vehicle 2	1985	FORD		LTD	<u></u>
	Year	Make		Model .	NASS Veh. No.
	GEN	VERAL INFO	RMATION		
	VEHICLE I			VEHICLE 2	
Size		3	Size		3
Weight			Weight		
1485+204+	// = / 7 0	O kg	1374 + 52	7 = 143	3 kg
Curb Occupant(s)	Cargo	<u> </u>	Curb Occupant(s)	Cargo	- <u> </u>
CDC	OIFDEL	$\frac{\nu}{\nu}$	CDC	10LYE	W3
PDOF (-180 to +180		<u>? </u>	PDOF (-180 to +1	80) <u>👌 💪 _</u>	<u>70</u> °
Stiffness		<u> </u>	Stiffness		3
	0.0	SENE INCOR			
		CENE INFOR		×	
Rest and Impact Posi	**************************************	Damage Inform	etion []Yes		
'	VEHICLE 1			VEHICLE 2	
Rest	Χ .	. m F	Rest	X	. m
Position	Υ	. m	Position	Υ	- · ··· m
	PSI	0		PSI	- ' ''
Impact Position	х	m	mpact Position	х	_ · m
	Υ	m		Υ	_ · m
	PSI			PSI	°
Slip Angle(-180 to +	180)	°	Slip Angle (-180 to	+180)	°
		VEHICLE M	OTION		
Sustained Contact] No [] Yes				
\	/EHICLE 1			VEHICLE 2	
/ehicle:Rotation	F 1 1 1 2 F		/ L		
Rotation Stop Bet	***************************************	****************************	Jehicle Rotation	I I No	[] Yes
notation Stop Bei	fore Rest [] No [l Yes	Hotation Stop B	Before Rest [] No	{ Yes
End of Rotation Position	x	m	End of Rotation	X	m
rosition	Υ	m	rosition	Υ	m
	PSI	о		PSI	0
Curved Path	[] No [) Vac	Curved Path	f 1 N=	[] V
Point on Path	t 1140 t) 1.cs ([] No	1 1 1 62
X	m Y	. m	Point on Path X .	. m Y	. m
Rotation Direction [None CW			[] None	
1101a11011 > 300°	i Lino I LYes		Hotation > 360°	[] No : [] Yes	1

National Accident Sampling System-Crashworthiness Data System: CRASHPC Program Summary

FRICTION INFORMATION	TRAJECTORY INFORMATION
Coefficient of Friction	Trajectory Data [] No [] Yes
Rolling Resistance Option	If No. Go To Demage Information
	Vehicle 1 Steer Angles
Vehicle 1 Rolling Resistance	LF ° RF °
LF RF	LR ° RR °
LR RR	
Webiele & Belline Besteven	Vehicle 2 Steer Angles
- Vehicle 2 Rolling Resistance LF RF	LF ° RF ° RR °
LR RR	LR RR
	Terrain Boundary [] No [] Yes
	First Point
	X m Y m
	Second Point
	Xm Ym
	Secondary Coefficient of Friction
DAMAGE IN	FORMATION
VEHICLE 1	VEHICLE 2
Damage Length L 162 cm	Damage Length L 2 5 2 cm
Crush Depths $C_1 = 26 \text{ cm}$	Crush Depths C, cm
C ₂	C ₂
C ₃ /_/_cm	C ₃ 3 cm
C ₄ /_3 cm	C ₄ 3 6 cm
$\frac{C_s}{C} = \frac{\frac{1}{2} cm}{\frac{1}{2} cm}$	C ₅
	C _k O un
Damage Offset D	Damage Offset D 🕀 💪 cm
	,
IF THIS COMMON IMPACT WAS WITH A MOTOR VEHICLE	NOT IN TRANSPORT, FILL IN THE INFORMATION BELOW.
Model Veer	The Weight CDC Coase Date and Damage Information
Model Year:	The Weight, CDC, Scene Data and Damage Information for this vehicle should be recorded above.
Model:	to this vehicle should be recorded above.
VIN:	
·	
0 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	d 1 1 1 1 -
Complete and ATTACH the appropriate vehicle	e damage sketch and dimensions to the Form.

SUMMARY OF CRASHPC RESULTS USING DAMAGE

Special Crash Investigations; TRC/IU Case 95-17, Task 9526

SPEED CHANGE (DAMAGE)

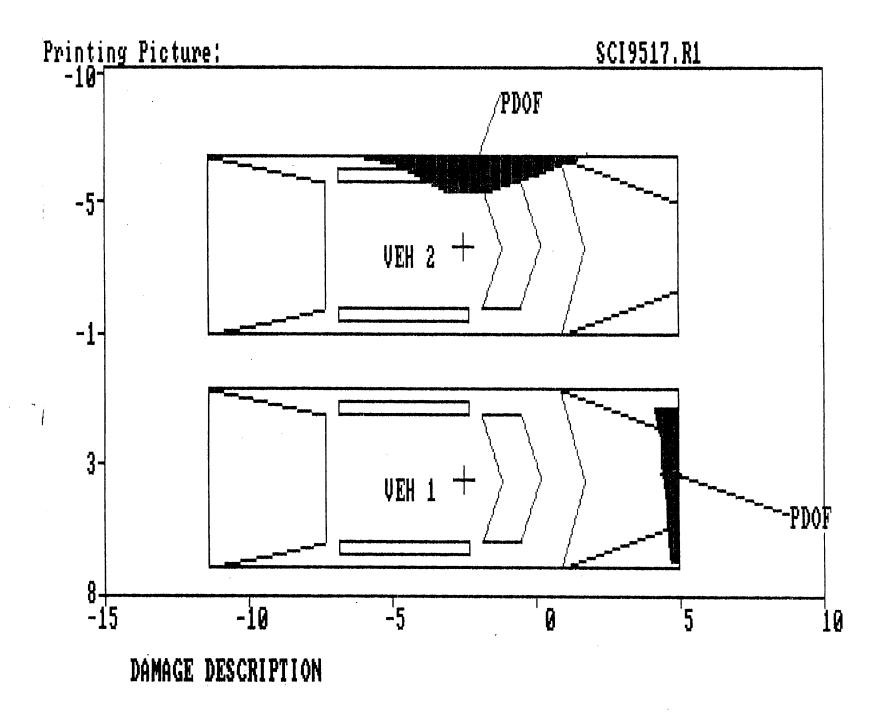
	(2022-7)
VEHICLE #1	
TOTAL	24 KPH (15 MPH)
LONGITUDINAL	-22 KPH (-14 MPH)
LATITUDINAL	-8 KPH (-5 MPH)
PDOF ANGLE	20 DEGREES
ENERGY DISSIPATED =	39487 JOULES (29120 FT-LB)
VEHICLE #2	
TOTAL	28 KPH (17 MPH)
LONGITUDINAL	-10 KPH (-6 MPH)
LATITUDINAL	26 KPH (16 MPH)
PDOF ANGLE	-70 DEGREES
ENERGY DISSIPATED =	51594 JOULES (38049 FT-LB)

DAMAGE DATA

	VEHICLE #1	VEHICLE #2
SIZE CATEGORY STIFFNESS CATEGORY	3 9	3 3
VEHICLE WEIGHT	1700 KGS (3748 LBS)	1433 KGS (3159 LBS)
CDC	01FDEW1	10LYEW3
PDOF ANGLE	20 DEGREES	-70 DEGREES
CRUSH LENGTH	162 CM. (64 IN.)	252 CM. (99 IN.)
C1	26 CM. (10 IN.)	0 CM. (0 IN.)
C2	18 CM. (7 IN.)	10 CM. (4 IN.)
C3	17 CM. (7 IN.)	35 CM. (14 IN.)
C4	13 CM. (5 IN.)	36 CM. (14 IN.)
C5	11 CM. (4 IN.)	19 CM. (7 IN.)
C6	9 CM. (4 IN.)	0 CM. (0 IN.)
D	7 CM. (3 IN.)	6 CM. (2 IN.)
D'	-6 CM. (-2 IN.)	13 CM. (5 IN.)
		(* INDICATES DEFAULT VALUE)

DIMENSIONS AND INERTIAL PROPERTIES

	VEHICLE #1	VEHICLE #2
CG TO FRONT AXLE	130 CM. (51 IN.)	130 CM. (51 IN.)
CG TO REAR AXLE	141 CM. (56 IN.)	141 CM. (56 IN.)
TRACK	150 CM. (59 IN.)	150 CM. (59 IN.)
CG TO FRONT OF VEH	228 CM. (90 IN.)	228 CM. (90 IN.)
CG TO REAR OF VEH	-270 CM. (-106 IN.)	-270 CM. (-106 IN.)
CG TO SIDE OF VEH	92 CM. (36 IN.)	92 CM. (36 IN.)
MOMENT OF INERTIA	14693 KGS (32391 LBS)	12385 KGS (27304 LBS)
VEHICLE MASS	4 KGS (10 LBS)	4 KGS (8 LBS)



CRASHPC

(BARRIER OPTION--CASE VEHICLE AND VEHICLE #2)



U.S. Department of Train National Highway Traffic Administration		IPC PROGRAM S (All Measurements in Metri	ic) NATIONAL ACCIDE	NT SAMPLING SYSTI HINESS DATA SYSTI
Identifying Title / O Primary Sampling Unit	95/7 Case NoStratum	Accident Event Sequence No.		of Run
CRASHPC Vehicl Vehicle 1 Vehicle 2	e Identification 1994 1985 Year	ACURA FORD Make	VIGOR 65 LTD Model	CV V2 NASS Veh. No.
	GE	NERAL INFORMA	TION	
Size Weight 1485+ 204 Curb Occupant(s) CDC PDOF (-180 to + Stiffness	DIFDE	Size Weight O kg Curb CDC PDOF (Stiffnes	-180 to +180) +	kg
Rest and Impact I		CENE INFORMATION Damage Information	ION Yes	
	VEHICLE 1	-	VEHICLE 2	
Rest Position	XYPSI	m Rest m	XY	m m
Impact Position	X Y PSI	m impact Position m	X Y PSI	mm
Slip Angle(-180 to	o + 180)		gle (-180 to +180)	
Customed De-		VEHICLE MOTIO	N	
Sustained Contact	t [] No [] Yes VEHICLE 1		VEHICLE 2	

	VEHIC	LE MOTION	
Sustained Contact [] No [] Yes		
\	VEHICLE 1	,	VEHICLE 2
Vehicle Rotation Rotation Stop Bel	[]No []Yes fore Rest []No []Yes		[] No [] Yes
End of Rotation Position	X m Y m PSI	rosition	X m Y m PSI •
Curved Path Point on Path X	[] No [] Yes	Curved Path Point on Path X	[] No [] Yes
Rotation Direction [Rotation Direction Rotation > 360°	[] None [] CW [] CCW

National Accident Sampling System-Crashworthiness Data System: CRASHPC Program Summary

FRICTION INFORMATION	TRAJECTORY INFORMATION
Coefficient of Friction	Trajectory Data [] No [] Yes
Rolling Resistance Option	If No. Go To Demage Information
	Vehicle 1 Steer Angles
Vehicle 1 Rolling Resistance	LF ° RF °
LF RF	LR ° RR °
LR RR	
	Vehicle 2 Steer Angles
Vehicle 2 Rolling Resistance	LF
LF RF	LR ° RR °
LR RR	
	Terrain Boundary [] No [] Yes
	1
	First Point
•	X m Y m
	Second Point
	Xm Ym
,	Secondary Coefficient of Friction
DAMAGE IN	FORMATION
VEHICLE 1	VEHICLE 2
Damage Length L 162 cm	Damage Length L cm
Crush Depths C ₁ 2 6 cm	Crush Depths C ₁ cm
C ₂ / 8 cm	C ₂ cm
C ₃	C ₃ cm
C₄ <u>/_3</u> cm	C ₄ cm
C _s cm	C ₅ : cm
C ₆ 9 cm	C ₆ cm
Damage Offset D 🕀	Damage Offset D + cm
	
IF THIS COMMON IMPACT WAS MUTH A MOTOR VEHICLE	NOT IN TRANSPORT, FILL IN THE INFORMATION BELOW.
IF THIS COMMON MIFACT WAS WITH A MOTOR VEHICLE	E NOT IN THANSPORT, FILE IN THE INFORMATION BELOW.
Model Year:	The Weight, CDC, Scene Data and Damage Information
Make:	for this vehicle should be recorded above.
Model:	
VIN:	
Complete and ATTACH the appropriate vehicle	e damage sketch and dimensions to the Form.
complete and ATTACT the appropriate vehicle	o damago stoton and dimensions to the FUIII.

SUMMARY OF CRASHPC RESULTS USING DAMAGE

Special Crash Investigations; TRC/IU Case 95-17, Task 9526

LATITUDINAL PDOF ANGLE	O KPH (O MPH) O DEGREES
LONGITUDINAL	0 KPH (0 MPH)
TOTAL	0 KPH (0 MPH)
VEHICLE #2	
ENERGY DISSIPATED =	39487 JOULES (29120 FT-LB)
PDOF ANGLE	20 DEGREES
LATITUDINAL	-7 KPH (-5 MPH)
LONGITUDINAL	-20 KPH (-13 MPH)
TOTAL	21 KPH (13 MPH)
VEHICLE #1	
	(DAMAGE)
	SPEED CHANGE

DAMAGE DATA

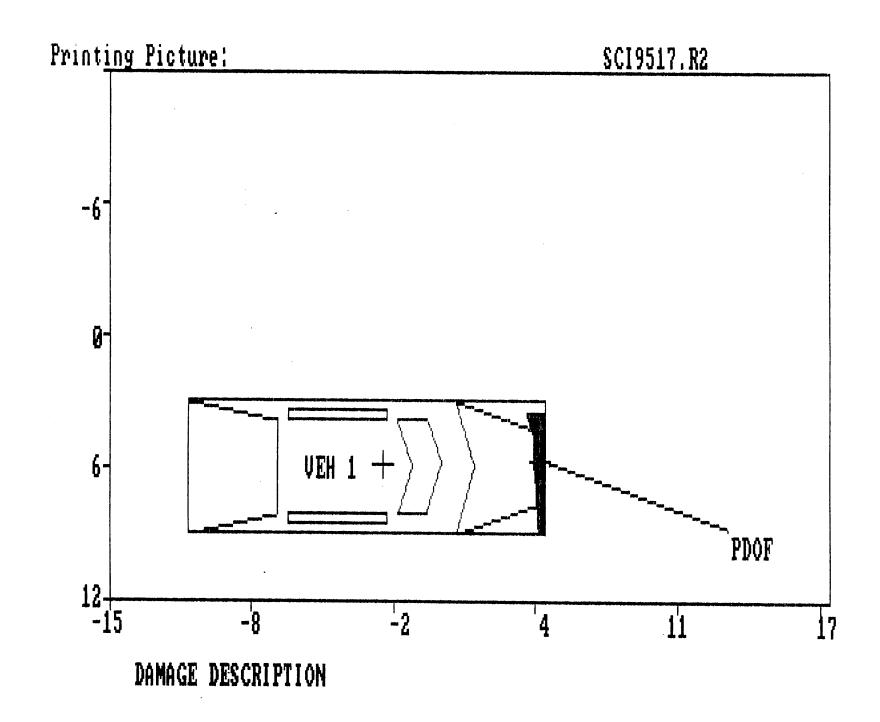
	VEHICLE #1	VEHICLE #2
SIZE CATEGORY STIFFNESS CATEGORY	3 9	11 0
VEHICLE WEIGHT	1700 KGS (3748 LBS)	***** KGS (2204586 LBS) *
CDC PDOF ANGLE	01FDEW1 20 DEGREES	BARRIER 0 DEGREES *
CRUSH LENGTH	162 CM. (64 IN.)	0 CM. (0 IN.) *
C1 C2	26 CM. (10 IN.) 18 CM. (7 IN.)	0 CM. (0 IN.) * 0 CM. (0 IN.) *
C3	17 CM. (7 IN.)	0 CM. (0 IN.) *
C4	13 CM. (5 IN.) 11 CM. (4 IN.)	0 CM. (0 IN.) * 0 CM. (0 IN.) *
C5 C6	9 CM. (4 IN.)	0 CM. (0 IN.) *
D	7 CM. (3 IN.)	0 CM. (0 IN.) *
D'	-6 CM. (-2 IN.)	0 CM. (0 IN.) *
		(* INDICATES DEFAULT VALUE)

DIMENSIONS AND INERTIAL PROPERTIES

VEHICLE #1 VEHICLE #2

CG TO FRONT AXLE 130 CM. (51 IN.) 127 CM. (50 IN.)

CG TO FRONT AXLE	130 CM. (51 IN.)	127 CM. (50 IN.)
CG TO REAR AXLE	141 CM. (56 IN.)	127 CM. (50 IN.)
TRACK	150 CM. (59 IN.)	127 CM. (50 IN.)
CG TO FRONT OF VEH	228 CM. (90 IN.)	127 CM. (50 IN.)
CG TO REAR OF VEH	-270 CM. (-106 IN.)	-127 CM. (-50 IN.)
CG TO SIDE OF VEH	92 CM. (36 IN.)	127 CM. (50 IN.)
MOMENT OF INERTIA	14693 KGS (32391 LBS)	***** KGS (***** LBS)
VEHICLE MASS	4 KGS (10 LBS)	2600 KGS (5732 LBS)





U.S. Department of Transpo National Highway Traffic Sa Administration			GRAM SUN	NATIONAL ACCIDENT	SAMPLING SYSTEN NESS DATA SYSTEN
Identifying Title Primary Sampling Unit	2 5 / Case NoStratum		Accident Event Sequence No.	Date (Month, day, year) o	
CRASHPC Vehicle Id Vehicle 1 Vehicle 2	1994	Acur FORD	A	VIGOR GS	
	Year	Make		Model	NASS Veh. No.
		GENERAL IN	VFORMATIC	ON	
Size Weight + +	VEHICLE I	<u> </u>	Size Weight	VEHICLE 2 52 + 7 = / 4	33 kg
Curb Occupant(s) CDC PDOF (-180 to +186) Stiffness	Cargo +	o	Curb Oc CDC PDOF (-180 Stiffness	Cupant(s) Cargo / O / Y / O to +180)	$\frac{E}{2}\frac{W}{7}\frac{3}{0}$
		SCENE INF	ORMATION	ı	
Rest and Impact Pos	itions (X) No, Go VEHICLE 1	To Damage Inf	ormation []	Yes VEHICLE 2	
Rest Position	X	m m o	Rest Position	X Y PSI	m m
Impact Position	X	m m	impact Position	X	m m
Slip Angle(-180 to +	180)	•	Slip Angle (-180 to +180)	0
		VEHICLE	MOTION	-	
Sustained Contact] No [] Yes /EHICLE 1			VEHICLE 2	
ehicle Rotation Rotation Stop Be	[] No fore Rest [] No	[] Yes [] Yes	Vehicle Rote Rotation	ation [] No n Stop Before Rest [] No	
End of Rotation Position	X Y PSI	m m o	End of F	Rotation X	m m
Curved Path Point on Path X	m Y	[] Yes m	Curved Path Point or X]] Yes

Rotation Direction [] None [] CW [] CCW

Rotation $>360^{\circ}$ [] No [] Yes

Rotation Direction [] None [] CW [] CCW

Rotation $>360^{\circ}$ [] No [] Yes

National Accident Sampling System-Crashworthiness Data System: CRASHPC Program Summary

FRICTION IN	IFORMATION		TRAJECTORY	INFORMATION
O C			Trajectory Data [] N	o []Yes
Coefficient of Friction	·		If No. Go To Damage In	
Rolling Resistance Option			Mahiala 1 Steer Apples	
Vehicle 1 Rolling Res	istance		Vehicle 1 Steer Angles	° RF •
LF			LF LR	• RR •
LR			Ln	
	· · · · · · · · · · · · · · · · · · ·		Vehicle 2 Steer Angles	
- Vehicle 2 Rolling Res	istance	· · ·		_ • RF <u> </u>
LF	RF		LR	• RR •
LR				
			Terrain Boundary []	No [] Yes
			First Point	
			X m	Y m
		•		' · · · · · · · · · · ·
			Second Point	
			Xm	Y m
,			Secondary Coefficient of	f Friction
	DA	MAGE IN	FORMATION	
VFHI	CLE 1		VEH	ICLE 2
Damage Length	L	cm	Damage Length	L <u>252</u> cm
Crush Depths	c,	cm	Crush Depths	C,O cm
	C,	cm		C ₂ cm
	C ₃	cm		C ₃ <u>2</u> <u>5</u> cm
	C ₄			C ₄ 3 6 cm
y A y• CA	C ₅	cm		C _s /_9_cm
·-	C ₆	cm		C ₆ Cm
Damaga Officet	n +		Damage Offset	D D G cm
Damage Offset	D	cm	Damage Offset	
		7		
IF THIS COMMON IMPAC	CT WAS WITH A MO	TOR VEHICL	NOT IN TRANSPORT, FILL IN	THE INFORMATION BELOW.
Model Year:			The Weight, CDC, Scene D	ata and Damage Information
Make:			for this vehicle should be r	ecorded above.
Model:				
\//KI.				
Complete and	ATTACH the appro	priate vehic	le damage sketch and dimen	sions to the Form.

SUMMARY OF CRASHPC RESULTS USING DAMAGE

Special Crash Investigations; TRC/IU Case 95-17, Task 9526

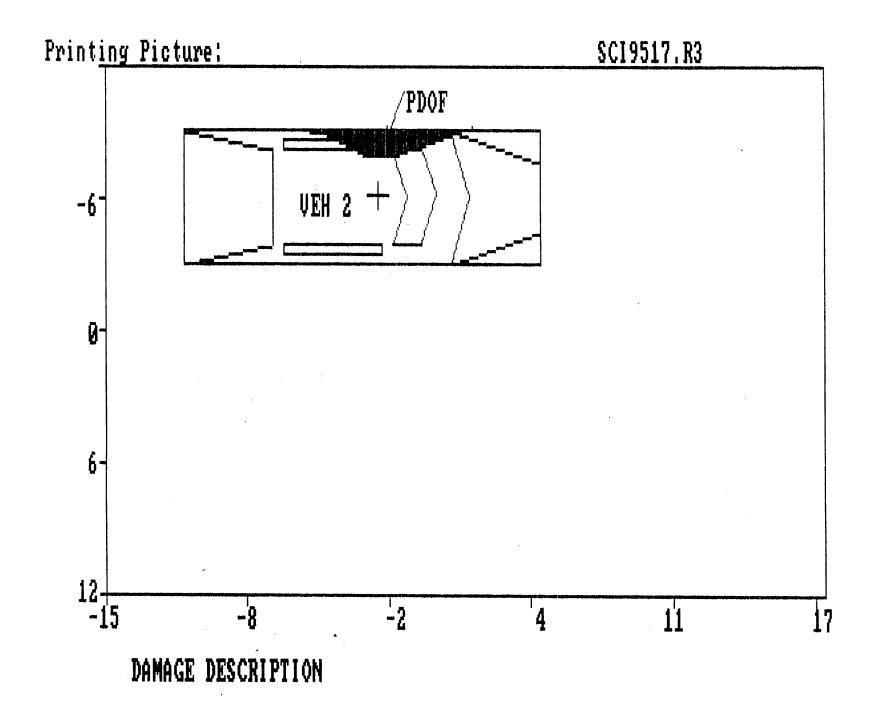
	SPEED CHANGE (DAMAGE)				
VEHICLE #1	(3.22)				
TOTAL	0 KPH (0 MPH)				
LONGITUDINAL	0 KPH (0 MPH)				
LATITUDINAL	0 KPH (0 MPH)				
PDOF ANGLE	O DEGREES				
ENERGY DISSIPATED =	O JOULES (O FT-LB)				
VEHICLE #2					
TOTAL	30 KPH (19 MPH)				
LONGITUDINAL	-10 KPH (-6 MPH)				
LATITUDINAL	28 KPH (18 MPH)				
PDOF ANGLE	-70 DEGREES				
ENERGY DISSIPATED =	51594 JOULES (38049 FT-LB)				

DAMAGE DATA

	VEHICLE #1	VEHICLE #2
SIZE CATEGORY STIFFNESS CATEGORY	11 0	3 3
VEHICLE WEIGHT	***** KGS (2204586 LBS) * BARRIER	1433 KGS (3159 LBS) 10LYEW3
PDOF ANGLE	O DEGREES *	-70 DEGREES
CRUSH LENGTH	0 CM. (0 IN.) *	252 CM. (99 IN.)
C1	0 CM. (0 IN.) *	0 CM. (0 IN.)
C2	0 CM. (0 IN.) *	10 CM. (4 IN.)
C3	0 CM. (0 IN.) *	35 CM. (14 IN.)
C4	0 CM. (0 IN.) *	36 CM. (14 IN.)
C5	0 CM. (0 IN.) *	19 CM. (7 IN.)
C6	0 CM. (0 IN.) *	0 CM. (0 IN.)
D	0 CM. (0 IN.) *	6 CM. (2 IN.)
D'	0 CM. (0 IN.) *	13 CM. (5 IN.)
		* INDICATES DEFAULT VALUE)

DIMENSIONS AND INERTIAL PROPERTIES

	VEHICLE #1	VEHICLE #2
CG TO FRONT AXLE	127 CM. (50 IN.)	130 CM. (51 IN.)
CG TO REAR AXLE	127 CM. (50 IN.)	141 CM. (56 IN.)
TRACK	127 CM. (50 IN.)	150 CM. (59 IN.)
CG TO FRONT OF VEH	127 CM. (50 IN.)	228 CM. (90 IN.)
CG TO REAR OF VEH	-127 CM. (-50 IN.)	-270 CM. (-106 IN.)
CG TO SIDE OF VEH	127 CM. (50 IN.)	92 CM. (36 IN.)
MOMENT OF INERTIA	***** KGS (***** LBS)	12385 KGS (27304 LBS)
VEHICLE MASS	2600 KGS (5732 LBS)	4 KGS (8 LBS)



EDCRASH

(DAMAGE ONLY ALGORITHM)

No \boldsymbol{A} and \boldsymbol{B} values are available for the case vehicle; therefore, the default values were used.

SUMMARY OF EDCRASH RESULTS

Lic. User: NHTSA #8

S/N: 0266-8 Version: 4.61

Date: -1995 SCI95-17 TEXAS

MESSAGES:

NO MESSAGES

VEHICLE # 1

IMPACT SPEED km/h		SI	SPEED CHANGE km/h				BASIS FOR RESULTS
FWD	LAT	TOTAL	LONG.	LATERAL	RESULIS		
N/A	N/A	N/A	N/A	N/A	SPINOUT TRAJECTORIES AND CONSERVATION OF LINEAR MOMENTUM		
N/A	N/A	N/A	N/A	N/A	SPINOUT TRAJECTORIES AND DAMAGE		
		23.6	-22.1	-8.1	DAMAGE DATA ONLY		

VEHICLE # 2

IMP SPE km	ED	sı	SPEED CHANGE km/h		BASIS FOR RESULTS
FWD	LAT	TOTAL	LONG.	LATERAL	RESULIS
N/A	N/A	N/A	N/A	N/A	SPINOUT TRAJECTORIES AND CONSERVATION OF LINEAR MOMENTUM
N/A	N/A	N/A	N/A	N/A	SPINOUT TRAJECTORIES AND DAMAGE
		28.0	-9.6	26.3	DAMAGE DATA ONLY



SUMMARY OF DAMAGE DATA (NOTE: '**' indicates default value)

	Vehicle	#1	Vehic:	Le #2
CLASS / STIFFNESS CATEGORIES WEIGHT CDC DAMAGE WIDTH CRUSH DEPTH 1 CRUSH DEPTH 2 CRUSH DEPTH 3 CRUSH DEPTH 4 CRUSH DEPTH 5 CRUSH DEPTH 6 DAMAGE MIDPOINT OFFSET DAMAGE ENERGY MAGNITUDE OF PRINCIPAL FORCE DIRECTION OF PRINCIPAL FORCE	3 / 9 1700.0 kg 01FDEW1 162.0 cm 26.0 cm 18.0 cm 17.0 cm 13.0 cm 11.0 cm 9.0 cm 7.0 cm	ules	3 / 3 1433.0 10LYI 252.0 0.0 10.0 35.0 36.0 19.0 0.0 6.0	kg Cm
MOMENT ARM OF PRINCIPAL FORCE DAMAGE CENTROID	-80.9 cm -6.1 cm		-13.9 13.1	

DIMENSIONAL, INERTIAL AND CRUSH STIFFNESS PROPERTIES (NOTE: '**' indicates default value)

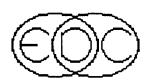
	Vehic	le #1		Vehic:	le #2	
CG TO FRONT AXLE	130.3	cm	**	130.3	cm	**
CG TO REAR AXLE	141.0	cm	**	141.0	cm	**
TRACKWIDTH	151.4	cm		144.3	cm	
YAW MOMENT OF INERTIA	3642.9	kg-m^2	**	3070.7	kg-m^2	**
MASS	1697.2			1430.6	kg	
BODY LENGTH FROM CG TO FROM	ONT 228.1	cm	**	228.1	cm	**
BODY LENGTH FROM CG TO RE	AR -270.3	cm	**	-270.3	cm	**
BODY OVERALL WIDTH	178.1	cm		180.3	cm	
CRUSH STIFFNESSES:	A	В		A	В	
	lb/in	lb/in^2	1	b/in	lb/in^2	
	272 4 44	22 2 7 7	•	77 7 44	E7 1 44	

Vehicle No. 1 Vehicle No. 2 X y Δ٧ CDC/PDOF: 01FDEW1 CDC/PDOF: 10LYEW3 20.0 deg -70.0 deg

181270 N

Max Impact Force:

Max Impact Force:



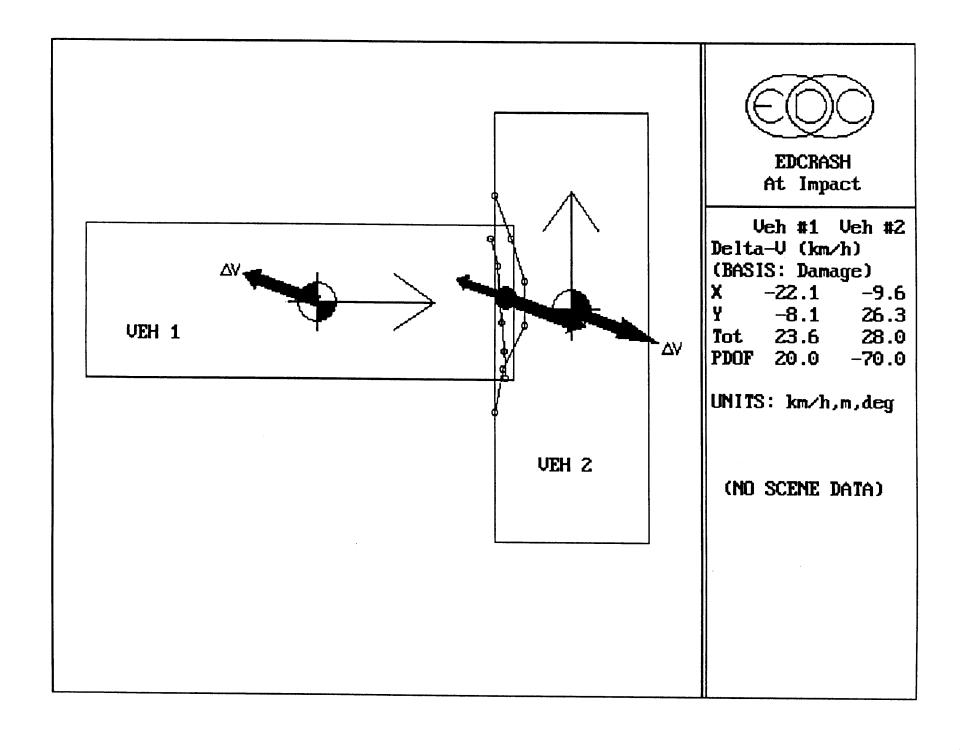
EDCRASH Damage Profiles

Veh #1 Veh #2 Delta-V (km/h): -22.1-9.6-8.1 26.3 23.6 28.0 Tot

y

292494 N

Crush Data (cm): 162.0 252.0 7.0 6.0 C1 26.0 0.0 18.0 10.0 C3 17.0 35.0 C4 13.0 36.0 **C**5 11.0 19.0 **C6** 9.0 0.0



TRC Vector Analysis Iterations

The TRC Vector Analysis program was used to determine the resultant theoretical Direction of Principal Force (PDOF) for both vehicles. Heading angles were determined from the scene evidence and weights were obtained from original specifications and interviewees. Based on our inspection of the each vehicle's crush, this contractor initially estimated the PDOFs as $+15 \pm 5$ degrees for the case vehicle and -75 ± 5 degrees for vehicle #2.

The driver of the case vehicle indicated in her interview that she was traveling about 56 k.p.h. (35 m.p.h.), below the posted SPEED LIMIT of 64 k.p.h. (40 m.p.h.), when she attempted to brake to avoid vehicle #2. This contractor believes that the case vehicle was most likely traveling 56-64 k.p.h. (35-40 m.p.h.) prior to impact. Because no pre-impact skidmarks were noted on the Police Accident Report, her speed at impact was most likely 48-56 k.p.h. (30-35 m.p.h.). Conflicting evidence exists regarding vehicle #2's speed at impact. The case vehicle driver indicated that vehicle #2 "stopped" in front of her after entering the intersection from the north leg; however, according to the driver of vehicle #2, she indicated that she attempted to accelerate upon seeing the case vehicle. Based on the crush and approximate final rest position of vehicle #2, the PDOF acting on vehicle #2 had to pass behind the center of gravity for the counterclockwise rotation to have occurred. In order to pass behind the center of gravity, the PDOF had to be more toward ten o'clock than nine o'clock. If vehicle #2 had been stopped or going very slow at impact, given the crush pattern, vehicle #2 should have rotated clockwise and moved west or west-northwest; however, it did not. Therefore, vehicle #2 must have been going at least 16 k.p.h. (10 m.p.h.).

Ten iterations of vehicle speeds are shown below: 40-64 k.p.h. (25-40 m.p.h.) for the case vehicle and 16-32 k.p.h. (10-20 m.p.h.) for vehicle #2. The program indicates that as vehicle #2's speed increases, the force collinearity vector rotates toward one and ten o'clock for the case vehicle and vehicle #2, respectively. Iterations two, three, six, and seven most closely match the observed vehicle dynamics. Therefore, after vehicle #2 entered the intersection, the speed at impact was most likely between 16-24 k.p.h. (10-15 m.p.h.). In accordance with NASS, CDS protocol, the PDOFs were assigned at +20 for the case vehicle and -70 for vehicle #2.

PDOF & Delta V Estimation From At Impact Heading Angles, Slip, and Momentum Case Number: TRC/IU 95-17

Vehicle Numbers: 01 and 02

(Both Vehicles Must Be Tracking Or CRASH 3 Slip Angle(s) Estimated) (Neither Vehicle May Be Backing)

(If The Back Of A Vehicle Is Involved, Its Speed Must Be Set To Zero) (Some Configurations Involving Heavy Trucks Give Erroneous Results)

Vector Analysis Area	GV27(V01)	GV28 (V02)		
Ln. Axis Heading Angle	270 (mph)	180	(mph)	
CG Heading Angle	270	180		
CRASH 3 Slip Angle	0	0		
Weight-Cargo	11	7	•	
Weight-Vehicle Curb Wt	1485	1374		
Weight-Passenger(s)	204	52		
Weight-Total	1700	1433		
Estimated Speed	64 (4e)	16	(10)	
Momentum	108800	22928	•	
PDOF (Degrees)	12	-78	91	STM
PDOF (Clock Direction)	12	9	Section 1	
Theoretical Delta V	30.2	35.8		
Theoretical Common Vel.	35.5	Post-Ci	rash CG Heading	258

PDOF & Delta V Estimation From At Impact Heading Angles, Slip, and Momentum Case Number: TRC/IU 95-17

Vehicle Numbers: 01 and 02

(Both Vehicles Must Be Tracking Or CRASH 3 Slip Angle(s) Estimated)

(Neither Vehicle May Be Backing)
(If The Back Of A Vehicle Is Involved, Its Speed Must Be Set To Zero) (Some Configurations Involving Heavy Trucks Give Erroneous Results)

Vector Analysis Area	GV27(V01)	GV28 (V02)		
Ln. Axis Heading Angle	270 (mph)	180	(mph)	
CG Heading Angle	270	180		
CRASH 3 Slip Angle	0	0		
Weight-Cargo	11	7		
Weight-Vehicle Curb Wt	1485	1374		
Weight-Passenger(s)	204	52		
Weight-Total	1700	1433		
Estimated Speed	56 (35)	16	(a)	
Momentum	95200	22928		
PDOF (Degrees)	14	- 76	91	STM
PDOF (Clock Direction)	12	9		
Theoretical Delta V	26.6	31.6		
Theoretical Common Vel.	31.3	Post-Cr	ash CG Heading	256

PDOF & Delta V Estimation From At Impact Heading Angles, Slip, and Momentum Case Number: TRC/IU 95-17

Vehicle Numbers: 01 and 02

(Both Vehicles Must Be Tracking Or CRASH 3 Slip Angle(s) Estimated)
(Neither Vehicle May Be Backing)

(Neither Vehicle May Be Backing)
(If The Back Of A Vehicle Is Involved, Its Speed Must Be Set To Zero)
(Some Configurations Involving Heavy Trucks Give Erroneous Results)

Vector Analysis Area	GV27(V01)	W28 (V02)		
Ln. Axis Heading Angle	270 (mph)	180	(mp h)	
CG Heading Angle CRASH 3 Slip Angle	270 0	180 0		·
Weight-Cargo	11	7		
Weight-Vehicle Curb Wt Weight-Passenger(s)	1485 204	1374 52		
Weight-Total	1700	1433		
Estimated Speed Momentum	48 (<i>3</i> 0) 81600	16 22928	(10)	
PDOF (Degrees)	16	-74	91	STM
PDOF (Clock Direction) Theoretical Delta V	1 23.1	10 27.5		
Theoretical Common Vel.	27.1		rash CG Heading	254

PDOF & Delta V Estimation From At Impact Heading Angles, Slip, and Momentum Case Number: TRC/IU 95-17

Vehicle Numbers: 01 and 02

(Both Vehicles Must Be Tracking Or CRASH 3 Slip Angle(s) Estimated)
(Neither Vehicle May Be Backing)

(If The Back Of A Vehicle Is Involved, Its Speed Must Be Set To Zero) (Some Configurations Involving Heavy Trucks Give Erroneous Results)

Vector Analysis Area	GV27 (V01)	SV28 (V02)		
Ln. Axis Heading Angle	270 (MPh)	180	(mph)	
CG Heading Angle	270	180	•	
CRASH 3 Slip Angle	0	0		
Weight-Cargo	11	7		
Weight-Vehicle Curb Wt	1485	1374		
Weight-Passenger(s)	204	52		
Weight-Total	1700	1433		
Estimated Speed	40 (<i>25</i>)	16	(10)	
Momentum	68000	22928		
PDOF (Degrees)	19	-71	447 91	STM
PDOF (Clock Direction)	1	10		
Theoretical Delta V	19.7	23.4	_	
Theoretical Common Vel.	22.9	Post-Cr	ash CG Heading	251

PDOF & Delta V Estimation From At Impact Heading Angles, Slip, and Momentum Case Number: TRC/IU 95-17

Vehicle Numbers: 01 and 02

(Both Vehicles Must Be Tracking Or CRASH 3 Slip Angle(s) Estimated)
(Neither Vehicle May Be Backing)

(If The Back Of A Vehicle Is Involved, Its Speed Must Be Set To Zero) (Some Configurations Involving Heavy Trucks Give Erroneous Results)

Vector Analysis Area	GV27(V01) G	W28 (V02)		
Ln. Axis Heading Angle	270 (mph)	180	(mph)	
CG Heading Angle	270	180		
CRASH 3 Slip Angle	0	0		•
Weight-Cargo	11	7		•
Weight-Vehicle Curb Wt	1485	1374		
Weight-Passenger(s)	204	52		
Weight-Total	1700	1433		
Estimated Speed	64 (40)	24	(15)	
Momentum	108800	34392		
PDOF (Degrees)	18	- 72	YELLOW !	91 STM
PDOF (Clock Direction)	1	10		
Theoretical Delta V	31.3	37.1		
Theoretical Common Vel.	36.4	Post-Cr	ash CG Headi	ng 252

PDOF & Delta V Estimation From At Impact Heading Angles, Slip, and Momentum Case Number: TRC/IU 95-17

Vehicle Numbers: 01 and 02

(Both Vehicles Must Be Tracking Or CRASH 3 Slip Angle(s) Estimated)
(Neither Vehicle May Be Backing)

(If The Back Of A Vehicle Is Involved, Its Speed Must Be Set To Zero) (Some Configurations Involving Heavy Trucks Give Erroneous Results)

Vector Analysis Area	GV27(V01)	SV28 (V02)	
Ln. Axis Heading Angle	270 (mph)	180 (mph)	
CG Heading Angle	270	180	
CRASH 3 Slip Angle	0	0	
Weight-Cargo	11	7	
Weight-Vehicle Curb Wt	1485	1374	
Weight-Passenger(s)	204	52	
Weight-Total	1700	1433	
Estimated Speed	56 (<i>35</i>)	24 (15)	
Momentum	95200	34392	
PDOF (Degrees)	20	-70 -70 /91	STM
PDOF (Clock Direction)	1	10	•
Theoretical Delta V	27.9	33.1	
Theoretical Common Vel.	32.3	Post-Crash CG Heading	250

PDOF & Delta V Estimation From At Impact Heading Angles, Slip, and Momentum Case Number: TRC/IU 95-17

Vehicle Numbers: 01 and 02

(Both Vehicles Must Be Tracking Or CRASH 3 Slip Angle(s) Estimated)
(Neither Vehicle May Be Backing)

(If The Back Of A Vehicle Is Involved, Its Speed Must Be Set To Zero) (Some Configurations Involving Heavy Trucks Give Erroneous Results)

Vector Analysis Area	GV27(V01)	GV28 (V02)	_	-
Ln. Axis Heading Angle CG Heading Angle CRASH 3 Slip Angle Weight-Cargo Weight-Vehicle Curb Wt Weight-Passenger(s)	270 (mpl) 270 0 11 1485 204	180 180 0 7 1374 52	(mph)	
Weight-Total Estimated Speed Momentum PDOF (Degrees) PDOF (Clock Direction)	1700 48 (30) 81600 23 1	1433 24 34392 -67 10	(/5)	STM
Theoretical Delta V Theoretical Common Vel.	24.5 28.3	29.1 Post-Ci	rash CG Heading	247

PDOF & Delta V Estimation From At Impact Heading Angles, Slip, and Momentum Case Number: TRC/IU 95-17

Vehicle Numbers: 01 and 02

(Both Vehicles Must Be Tracking Or CRASH 3 Slip Angle(s) Estimated)
(Neither Vehicle May Be Backing)

(Neither Vehicle May Be Backing)
(If The Back Of A Vehicle Is Involved, Its Speed Must Be Set To Zero)
(Some Configurations Involving Heavy Trucks Give Erroneous Results)

Vector Analysis Area	GV27 (V01)	GV28 (V02)			
Ln. Axis Heading Angle	270 (mph)	180	(mph)		
CG Heading Angle	270	180			
CRASH 3 Slip Angle	0	0			
Weight-Cargo	11	7			
Weight-Vehicle Curb Wt	1485	1374			
Weight-Passenger(s)	204	52			
Weight-Total	1700	1433			
Estimated Speed	64 (%)	32	(ae)		
Momentum	108800	45856	_		
PDOF (Degrees)	23	-67		7000/91	STM
PDOF (Clock Direction)	1	10			
Theoretical Delta V	32.7	38.8			
Theoretical Common Vel.	37.7	Post-Cr	rash CG	Heading	247

PDOF & Delta V Estimation From At Impact Heading Angles, Slip, and Momentum Case Number: TRC/IU 95-17

Vehicle Numbers: 01 and 02

(Both Vehicles Must Be Tracking Or CRASH 3 Slip Angle(s) Estimated) (Neither Vehicle May Be Backing)

(If The Back Of A Vehicle Is Involved, Its Speed Must Be Set To Zero) (Some Configurations Involving Heavy Trucks Give Erroneous Results)

Vector Analysis Area	GV27 (V01)	GV28 (V02)	•	
Ln. Axis Heading Angle	270 (mph)	180	(mph)	
CG Heading Angle	270	180	•	
CRASH 3 Slip Angle	0	0		
Weight-Cargo	11	7		
Weight-Vehicle Curb Wt	1485	1374		
Weight-Passenger(s)	204	52		
Weight-Total	1700	1433	. 3	
Estimated Speed	56 <i>(3</i> 5)	32	(20)	
Momentum	95200	45856		
PDOF (Degrees)	26	-64	91	STM
PDOF (Clock Direction)	1	10		
Theoretical Delta V	29.5	35.0		
Theoretical Common Vel.	33.7	Post-C	rash CG Heading	244

PDOF & Delta V Estimation From At Impact Heading Angles, Slip, and Momentum Case Number: TRC/IU 95-17

Vehicle Numbers: 01 and 02

(Both Vehicles Must Be Tracking Or CRASH 3 Slip Angle(s) Estimated) (Neither Vehicle May Be Backing)
(If The Back Of A Vehicle Is Involved, Its Speed Must Be Set To Zero)

(Some Configurations Involving Heavy Trucks Give Erroneous Results)

Vector Analysis Area	GV27 (V01)	GV28 (V02)		
Ln. Axis Heading Angle	270 (mph)	180	(mph)	
CG Heading Angle	270	180	•	
CRASH 3 Slip Angle	0	0		
Weight-Cargo	11	7		
Weight-Vehicle Curb Wt	1485	1374		
Weight-Passenger(s)	204	52		
Weight-Total	1700	1433		
Estimated Speed	48 (3o)	32	(a0)	
Momentum	81600	45856		
PDOF (Degrees)	29	-61	91	STM
PDOF (Clock Direction)	1	10		
Theoretical Delta V	26.4	31.3		
Theoretical Common Vel.	29.9	Post-C	rash CG Heading	241

TRC VECTOR ANALYSIS PROGRAM

PDOF (Direction of Principal Force) is assigned based on the vehicular crush. Heading Angles are assigned based on scene evidence and Police Accident Reported crash configurations. This program was created to enable researchers in the NASS CDS to assess the compatibility of their assigned vehicle PDOFs and heading angles. When two vehicles are involved in an impact, researchers were often times submitting PDOFs that were not compatible with their heading angle assignments, indicating a lack of understanding of basic vector analysis concepts. Subsequently, the TRC has used this program to help verify our field PDOF assignments by making logical changes in the reconstructed crash configuration and determining the affect these changes have on PDOF.

Principal: This program is based on the geometric triangle rule (i.e., the sum of the three angles of a triangle must equal 180 degrees). The direction of one vehicle's (e.g., the case vehicle or Vehicle #1) CG (i.e., Center of Gravity) forms one side of the triangle. The direction of the other vehicle's (e.g., Vehicle #2) CG forms a second side of the triangle. The third side of the triangle is then formed by each vehicle's respective PDOF because the forces are assumed to act collinear.

Assumptions: It is assumed that each vehicle's weight can be represented by a "point-mass". It is assumed that the vector force acting on each vehicle goes through the center of gravity (i.e., CG) of the vehicle. Further, it is assumed that the vehicles move off together joined as one object. This program does not take into affect the mass reduction that occurs in other reconstruction programs since its primary purpose is to check the compatibility of the field determined PDOF and Heading Angle.

Inputs: Heading Angle, Slip Angle ("Yaw"), Weights (Curb Weight, Cargo Weight, and Weight of all occupants), and Speed

Outputs: This program's primary output is each vehicle's theoretical PDOF, presented in both degrees and CDC clock directions. Other outputs include a theoretical Delta V and a theoretical Common Velocity. The theoretical Delta V shows the maximum Delta V for the given speeds and weights assuming a dead center impact. For special crash investigation purposes, the last two outputs should be essentially ignored.

Use: The TRC uses this program on nonaxial collisions involving two vehicles to vary the "less established inputs" in order to determine what theoretical affect these changes have on our field observed PDOFs. The most solid input is the weights of the respective vehicles. Even though the cargo weight is rarely accurately known, its order of magnitude is such that in the vast majority of crashes its affect is minor. The next solid inputs are the vehicle's heading angle and slip angle. In most cases these are fairly well known from the available physical evidence. The least solid input is the vehicle's speed. The submitted iterations show the inputs and what variations to those inputs that the TRC took into consideration. The PDOF outcomes are then compared with our field observed PDOF and adjustments are made, if necessary, in our final coding.

Purpose: This program is but one more tool in the hands of a researcher aimed at providing the best data.

Appendix C:

NASS CDS ACCIDENT FORM

U.S. Department of Transportation

National Highway Traffic Safety Administration

ACCIDENT FORM

NATIONAL ACCIDENT SAMPLING SYSTEM CRASHWORTHINESS DATA SYSTEM

1.	Primary	Sampling	Unit Number		/	_(
				^		

2. Case Number - Stratum

9517

IDENTIFICATION

3. Number of General Vehicle Forms Submitted

02

4. Date of Accident (Month, Day, Year)



5. Time of Accident



Code reported military time of accident.

NOTE: Midnight = 2400 Unknown = 9999

SPECIAL STUDIES - INDICATORS

Check () each special study (SS15-SS18 below) that has been completed; code 1 for the checked special studies and 0 for the special studies not checked.

6. ___ SS15 Administrative Use

0

0

7. ____ SS16 Pedestrian Crash Data Study
(Data for this special study available

in a separate file.)

S. ___ SS17 Impact Fires

0

9. SS18 Unsafe Driver Actions

0

0

10. ___ SS19 _____

NUMBER OF EVENTS.

11. Number of Recorded Events in This Accident

01

Code the number of events which occurred in this accident.

ACCIDENT EVENTS

For each event that occurred in the accident, code the lowest numbered vehicle in the left columns and the other involved vehicle or object in the right columns.

Accident Event Sequence Number	Vehicle Number	Class Of Vehicle	General Area of Damage	Vehicle Number or Object Contacted	Class Of Vehicle	General Area of Damage
12. <u>0</u> <u>1</u>	13. <u>O</u>	14. <u>64</u>	15. <u>F</u>	16. <u>0</u> <u>2</u>	17. <u>03</u>	18. <u></u>
19. <u>0</u> <u>2</u>	20	21	22	23	24	25
26. <u>0 3</u>	27	28	29	30	31	32
33. <u>0 4</u>	34	35	36	37	38	39
40. <u>0</u> <u>5</u>	41	42	43	44	45	46

IF GREATER THAN FIVE EVENTS, CONTINUE CODING ON THE ACCIDENT EVENT SUPPLEMENT

CODES FOR CLASS OF VEHICLE				
(00) Not a motor vehicle (01) Subcompact/mini (wheelbase (02) Compact (wheelbase ≥ 254 (03) Intermediate (wheelbase ≥ 278 to 109) (04) Full size (wheelbase ≥ 278 to 109) (05) Largest (wheelbase ≥ 291 co 109) (09) Unknown passenger car size (14) Compact utility vehicle (15) Large utility vehicle (15) Large utility vehicle (16) Utility station wagon (≤ 4,500 (16) Utility station wagon (≤ 4,500 (19) Unknown utility type (20) Minivan (≤ 4,500 kgs GVWI (21) Large van (≤ 4,500 kgs GVWI (24) Van Based school bus (≤ 4,500 (28) Other van type (≤ 4,500 kgs (29) Unknown van type (≤ 4,500 (30) Compact pickup truck (≤ 4,500 (31)	254 cm) < 254 cm) but < 265 cm) 655 but < 278 cm) out < 291 cm) V 0 kgs GVWR) 00 kgs GVWR) 6000 kgs GVWR) 6500 kgs GVWR) kgs GVWR) kgs GVWR)	(38) (39) (45) (45) (48) (49) (50) (58) (67) (68) (78) (79) (80) (90) (69)	Large pickup truck (≤ 4,500 other pickup truck (≤ 4,500 other light truck (≤ 4,500 other light truck (≤ 4,500 other light truck type (Unknown light truck type (Unknown light vehicle type other bus (> 4,500 kgs Government	00 kgs GVWR) e (≤ 4,500 kgs GVWR kgs GVWR) ≤ 4,500 kgs GVWR) e ased)(> 4,500 kgs GVWR) VWR) R)
00	DEC FOR OFFICE	DEA OF	DAMAGE (CAD)	
	lision (L)	AREA OF I Right side Left side Back		(T) Top (U) Undercarriage (9) Unknown
TDC (0) Not a r APPLICABLE (N) Nonco VEHICLES (F) Front (R) Right s	lision (B)		nit with cargo area ailer or straight truck) of tractor)	(C) Rear of cab (V) Front of cargo area (T) Top (U) Undercarriage (9) Unknown
CODES (01-30) — Vehicle Number Noncollision (31) Overturn — rollover (excl.) (32) Rollover — end-over-end (33) Fire or explosion (34) Jackknife (35) Other intraunit damage (sp. 1) (36) Noncollision injury		(57) (58) (59) (60) (61) (62) (63) (64)	Fence Wall Building Ditch or culvert Ground Fire hydrant Curb Bridge Other fixed object (specif	fy):
(38) Other noncollision (specification) (39) Noncollision — details under the collision With Fixed Object (41) Tree (≤ 10 cm in diameted (42) Tree (> 10 cm in diameted (43) Shrubbery or bush (44) Embankment (45) Breakaway pole or post (≤ 10 cm in (50) Pole or post (≤ 10 cm in (51) Pole or post (> 10 cm in (52) Pole or post (> 30 cm in (53) Pole or post (diameter undetails)	er) er) any diameter) diameter) ut ≤ 30 cm in diameter) diameter)	(70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (88)	Unknown fixed object n with Nonfixed Object Passenger car, light truck not in-transport Medium/heavy truck or b Pedestrian Cyclist or cycle Other nonmotorist or con Vehicle occupant Animal Train Trailer, disconnected in t Object fell from vehicle is Other nonfixed object (sp	ransport n-transport pecify):
(55) Impact attenuator (56) Other traffic barrier (inclusive):	ides guardrail)		Other event (specify): Unknown event or object	R

Appendix D:

NASS CDS VEHICLE FORMS: CASE VEHICLE

National Highway Traffic Safety Administration	GENERAL VE	HICLE FORM NATIONAL ACCIDENT SAMPLING SYSTEM CRASHWORTHINESS DATA SYSTEM
Primary Sampling Unit Number Case Number - Stratum Vehicle Number	9517	12. Speed Limit (000) No statutory limit Code posted or statutory speed limit in kmph (999) Unknown
4. Vehicle Model Year Code the last two digits of the r (99) Unknown 5. Vehicle Make (specify): Applicable codes are found in your NASS Data Collection, Coding a Editing Manual. (99) Unknown 6. Vehicle Model (specify): Applicable codes are found in your NASS Data Collection (specify): Applicable codes are found in your NASS Data Collection (specify): Applicable codes are found in your NASS Data Collection (specify): Applicable codes are found in your NASS Data Collection (specify): Applicable codes are found in your NASS Data Collection (specify): Applicable codes are found in your NASS Data Collection (specify): Applicable codes are found in your NASS Data Collection (specify): Applicable codes are found in your NASS Data Collection (specify): Applicable codes are found in your NASS Data Collection (specify): Applicable codes are found in your NASS Data Collection (specify): Applicable codes are found in your NASS Data Collection (specify): Applicable codes are found in your NASS Data Collection (specify): Applicable codes are found in your NASS Data Collection (specify): Applicable codes are found in your NASS Data Collection (specify): Applicable codes are found in your NASS Data Collection (specify): Applicable codes are found in your NASS Data Collection (specify): Applicable codes are found in your NASS Data Collection (specify):	model year $\frac{9}{5}\frac{4}{4}$ our $\frac{5}{9}\frac{4}{4}$	13. Police Reported Alcohol Presence For Driver (0) No alcohol present (1) Yes alcohol present (7) Not reported (8) No driver present (9) Unknown 14. Alcohol Test Result For Driver Code actual value (decimal implied before first digit—0.xx) (95) Test refused (96) None given (97) AC test performed, results unknown (98) No driver present
NASS Data Collection, Coding a Editing Manual. (999) Unknown 7. Body Type Note: Applicable codes may be the back of this page. 8. Vehicle Identification Number	found on	(99) Unknown Source: PAP 15. Police Reported Other Drug Presence For Driver (0) No other drug(s) present (1) Yes other drug(s) present (7) Not reported (8) No driver present
1 H C C 2 6 4 R C 1 2 3 4 5 6 7 8 9 10 11 Left justify; Slash zeros and lette No VIN—Code all zeros Unknown (1) 9. Vehicle Special Use (This Trip) (0) No special use (1) Taxi (2) Vehicle used as school bus (3) Vehicle used as other bus (4) Military (5) Police	12 13 14 15 16 17 er Z (0 and -Z)	(9) Unknown 16. Other Drug Specimen Test Result For Driver (0) No specimen test given (1) Drug(s) not found in specimen (2) Drug(s) found in specimen, (specify): (3) Specimen test given, results unknown or not obtained (8) No driver present (9) Unknown if specimen test given
(6) Ambulance (7) Fire truck or car (8) Other (specify): (9) Unknown OFFICIAL RECOR	1	17. Driver's Zip Code (00001)Driver not a resident of U.S. or territories Code actual 5-digit zip code (99998)No driver present (99999)Unknown
 10. Police Reported Vehicle Disposit (0) Not towed due to vehicle da (1) Towed due to vehicle damage (9) Unknown 11. Police Reported Travel Speed Code to the nearest kmph (NOT less than 0.5 kmph) (160) 159.5 kmph and above (999) Unknown mph X 1.6093 =kr 	mage ge 999	18. Driver's Race/Ethnic Origin (1) White (non-Hispanic) (2) Black (non-Hispanic) (3) White (Hispanic) (4) Black (Hispanic) (5) American Indian, Eskimo or Aleut (6) Asian or Pacific Islander (7) Other (specify): (8) No driver present (9) Unknown

CODES FOR BODY TYPE

CDS APPLICABLE VEHICLES

Automobiles

- (01) Convertible (excludes sun-roof, t-bar)
- (02) 2-door sedan, hardtop, coupe
- (03) 3-door/2-door hatchback
- (O4) 4-door sedan, hardtop
- (05) 5-door/4-door hatchback
- (06) Station wagon (excluding van and truck based)
- (07) Hatchback, number of doors unknown
- (08) Other automobile type (specify):
- (09) Unknown automobile type

Automobile Derivatives

- (10) Auto based pickup (includes El Camino, Caballero, Ranchero, Brat, and Rabbit pickup)
- (11) Auto based panel (cargo station wagon, auto based ambulance/hearse)
- (12) Large limousine more than four side doors or stretched chassis
- (13) Three-wheel automobile or automobile derivative

Utility Vehicles (≤ 4,500 kgs GVWR)

- (14) Compact utility (Jeep CJ-2 CJ-7, Scrambler, Golden Eagle, Renegade, Laredo, Wrangler, Cherokee [84 and after], Dispatcher, Raider, Bronco II, Bronco [76 and before], Explorer, S-10 Blazer, Geo Tracker, Bravada, S-15 Jimmy, Thing, Pathfinder, Trooper, Trooper II, Rodeo, Amigo, Navajo, 4-Runner, Montero, Passport, Samurai, Sidekick, Rocky)
- (15) Large utility (includes Jeep Cherokee [83 and before], Ramcharger, Trailduster, Bronco-fullsize [78 and after], fullsize Blazer, fullsize Jimmy, Hummer, Landcruiser, Rover, Scout, Yukon)
- (16) Utility station wagon (Chevy Suburban, GMC Suburban, Travelall, Grand Wagoneer, includes suburban Impusine)
- (19) Utility, unknown body type

Van Based Light Trucks (≤ 4,500 kgs GVWR)

- (20) Minivan (Town and Country, Caravan, Grand Caravan, Voyager, Grand Voyager, Mini-Ram, Vista, Aerostar, Windstar, Villager, Lumina APV, Trans Sport, Silhouette, Astro, Safari, Toyota Van, Toyota Minivan, Previa, Nissan Minivan, Quest, Mitsubishi Minivan, Expo Wagon, Vanagon/Camper.)
- (21) Large van (B150-B350, Sportsman, Royal, Maxiwagon, Ram, Tradesman, Voyager [83 and before], E150-E350, Econoline, Clubwagon, Chateau, G10-G30, Chevy Van, Beauville, Sport Van, G15-G35, Rally Van, Vandura.)
- (22) Step van or walk-in van (≤ 4,500 kgs GVWR)
- (23) Van based motorhome (≤ 4,500 kgs GVWR)
- (24) Van based school bus (≤ 4,500 kgs GVWR)
- (25) Van based other bus (≤ 4,500 kgs GVWR)
- (28) Other van type (Hi-Cube Van, Kary) (specify):
- (29) Unknown van type

Light Conventional Trucks (Pickup style cab, ≤ 4,500 kgs GVWR)

- (30) Compact pickup (D50, Colt P/U, Ram 50, Dakota, Arrow Pickup [foreign], Ranger, Courier, S-10, T-10, LUV, S-15, T-15, Sonoma, Datsun/Nissan Pickup, P'up, Mazda Pickup, Toyota Pickup, Mitsubishi Pickup)
- (31) Large Pickup (Jeep Pickup, Comanche, Ram Pickup, D100-D350, W100-W350, F100-F350, C10-C35, K10-K35, R10-R35, V10-V35, Silverado, Sierra, R100-R500, T100)

- (32) Pickup with slide-in camper
- (33) Convertible pickup
- (39) Unknown pickup style light conventional truck type

Other Light Trucks (≤ 4,500 kgs GVWR)

- (40) Cab chassis based (includes rescue vehicles, light stake, dump, and tow truck)
- (41) Truck based panel
- (42) Light truck based motorhome (chassis mounted)
- (45) Other light conventional truck type
- (48) Unknown light truck type
- (49) Unknown light vehicle type (automobile, utility, van, or light truck)

OTHER VEHICLES

Buses (Excludes Van Based)

- (50) School bus (designed to carry students, not cross country or transit)
- (58) Other bus type (e.g., transit, intercity, bus based motorhome) (specify):
- (59) Unknown bus type

Medium/Heavy Trucks (> 4,500 kgs GVWR)

- (60) Step van (> 4,500 kgs GVWR)
- (61) Single unit straight truck (4,500 kgs < GVWR ≤ 8,850 kgs)
- (62) Single unit straight truck (8,850 kgs < GVWR ≤ 12,000 kgs)</p>
- (63) Single unit straight truck (> 12,000 kgs GVWR)
- (64) Single unit straight truck, GVWR unknown
- (65) Medium/heavy truck based motorhome
- (67) Truck-tractor with no cargo trailer
- (68) Truck-tractor pulling one trailer
- (69) Truck-tractor pulling two or more trailers
- (70) Truck-tractor (unknown if pulling trailer)
- (78) Unknown medium/heavy truck type (79) Unknown truck type (light/medium/heavy)

Motored Cycles (Does Not Include All-Terrain Vehicles/Cycles)

- (80) Motorcycle
- (81) Moped (motorized bicycle)
- (82) Three-wheel motorcycle or moped
- (88) Other motored cycle (minibike, motorscooter) (specify):_____
- (89) Unknown motored cycle type

Other Vehicles

- (90) ATV (All-Terrain Vehicle) and ATC (All-Terrain Cycle)
- (91) Snowmobile
- (92) Farm equipment other than trucks
- (93) Construction equipment other than trucks
- (97) Other vehicle type
- (99) Unknown body type

	PRECRASH ENVIRONMENTAL DATA	25	Bookway Sydney Condition	1
		25.	Roadway Surface Condition	
19.	Relation To Interchange Or Junction		(1) Dry	
	(O) Non-interchange area and non-junction		(2) Wet	
1	(1) Interchange area related	1	(3) Snow or slush	
1	(1) mile. on any end to a to		(4) Ice	
j	Non-Interchange junctions	l	(5) Sand, dirt, or oil	
	(2) Intersection related		(8) Other (specify):	
1		l	(9) Unknown	
l	(3) Driveway, alley access related			
ł	(4) Other junction (specify)			1
1		26.	Light Conditions	
1	(5) Unknown type of junction		(1) Daylight	
i		l	(2) Dark	
1	(9) Unknown	l	(3) Dark, but lighted	
1		1	(4) Dawn	
1	1	1	(5) Dusk	
20.	Trafficway Flow		(9) Unknown	
1	(0) Not physically divided (two way traffic)	1		
ļ	(1) Divided trafficway-median strip without			
	positive barrier	27.	. Atmospheric Conditions	0
	(2) Divided trafficway-median strip with positive		(0) No adverse atmospheric-related driving	
	barrier		conditions	
1	(3) One way traffic		(1) Rain	
1	(9) Unknown		(2) Sleet/hail	
			(3) Snow	
İ	1.1		(4) Fog	
21.	Number Of Travel Lanes	l		
	(1) One		(5) Rain and fog	
	(2) Two		(6) Sleet and fog	
1	(3) Three	į	(7) Other (e.g., smog, smoke, blowing sand o	ər
	(4) Four		dust, etc.) (specify):	
	(5) Five	İ	(0)	
1	(6) Six		(9) Unknown	
	(7) Seven or more			5
	(9) Unknown	28.	. Traffic Control Device	$\underline{\underline{\mathcal{L}}}$
1		1	(0) No traffic control(s)	
1		1	(1) Traffic control signal (not RR crossing)	
22.	Roadway Alignment			
	(1) Straight	1	Regulatory	
ŧ	(2) Curve right		(2) Stop sign	
	(3) Curve left	1	(3) Yield sign	
1	(9) Unknown	1	(4) School zone sign	
1		l	(5) Other regulatory sign (specify):	
22	Pandunay Brafile	l	SPEED LIMIT	
23.	Roadway Profile	l	(6) Warning sign (not RR crossing)	
1	(1) Level	1	(7) Unknown sign	
	(2) Uphill grade (>2%)	l	(8) Miscellaneous/other controls including RR	
İ	(3) Hill crest		controls (specify):	
1	(4) Downhill grade (>2%)	1	•	
1	(5) Sag	1	(9) Unknown	
	(9) Unknown	1	• •	
	•	1		1
24	Roadway Surface Type	29	. Traffic Control Device Functioning	4
1-7.	(1) Concrete	1	(0) No traffic control device	
1	(2) Bituminous (asphalt)	1	(1) Traffic control device not functioning	
1	(3) Brick or block	1	(specify):	
		1	(2) Traffic control device functioning properly	
	(4) Slag, gravel, or stone	1	(9) Unknown	•
	(5) Dirt	1	(3) UIKIOWII	
	(8) Other (specify):	1		
	(9) Unknown	1	•	
		1		

	PRECRASH DRIVER RELATED DATA	This Vehicle Traveling
	Driver's Distraction/Inattention To Driving $D 3$	(10) Over the lane line on left side of travel lane
30.	(Prior To Recognition Of Critical Event)	(11) Over the lane line on right side of travel lane
	(00) No driver present	(12) Off the edge of the road on the left side (13) Off the edge of the road on the right side
	(01) Attentive or not distracted	(14) End departure
	(02) Looked but did not see	(15) Turning left at intersection
	(02) E001100 Dat 010 1100	(16) Turning right at intersection
	Distractions	(17) Crossing over (passing through) intersection
		(18) This vehicle decelerating
	Talking + listening another	(19) Unknown travel direction
	(03) By other occupant(s), (specify): Talking + listening another	
		Other Motor Vehicle In Lane
	(05) While talking or listening to cellular phone	(50) Other vehicle stopped
	(specify location and type of phone):	(51) Traveling in same direction with lower steady
		speed
	(06) While dialing cellular phone (specify location	(52) Traveling in same direction while decelerating
	and type of phone):	(53) Traveling in same direction with higher speed
	107) While adjusting climate controls	(54) Traveling in opposite direction
	(07) While adjusting climate controls (08) While adjusting radio, cassette, CD (specify):	(55) In crossover
	(08) While adjusting radio, cassette, CD (specify).	(56) Backing
	(09) While using other device/object in vehicle	(59) Unknown travel direction of other motor
	(specify):	vehicle in lane
	(10) Sieepy or fell asleep	Other Motor Vehicle Encroaching Into Lane
	(11) Distracted by outside person, object, or event	(60) From adjacent lane (same direction)—over left
	(specify):	lane line
	(12) Eating or drinking	(61) From adjacent lane (same direction)—over right
	(13) Smoking related	lane line
	(97) Distracted/inattentive, details unknown	(62) From opposite direction—over left lane line
	(98) Other, distraction (specify):	(63) From opposite direction—over right lane line
		(64) From parking lane
	(99) Unknown	(65) From crossing street, turning into same
31.	Pre-Event Movement (Prior to	direction
•	Recognition of Critical Event)	(66) From crossing street, across path
	(00) No driver present	(67) From crossing street, turning into opposite
	(01) Going straight	direction
	(02) Decelerating in traffic lane	(68) From crossing street, intended path not known
	(03) Accelerating in traffic lane	(70) From driveway, turning into same direction
	(04) Starting in traffic lane	(71) From driveway, across path (72) From driveway, turning into opposite direction
	(05) Stopped in traffic lane	(73) From driveway, intended path not known
	(06) Passing or overtaking another vehicle (07) Disabled or parked in travel lane	(74) From entrance to limited access highway
	(08) Leaving a parking position	(78) Encroachment by other vehicle—details
	(09) Entering a parking position	unknown
	(10) Turning right	
	(11) Turning left	Pedestrian, Pedalcyclist, or Other Nonmotorist
	(12) Making a U-turn	(80) Pedestrian in roadway
	(13) Backing up (other than for parking position)	(81) Pedestrian approaching roadway
	(14) Negotiating a curve	(82) Pedestrian—unknown location
	(15) Changing lanes	(83) Pedalcyclist or other nonmotorist in roadway
	(16) Merging	(specify):
	(17) Successful avoidance maneuver to a previous	(84) Pedalcyclist or other nonmotorist approaching
	critical event	roadway, (specify):
	(97) Other (specify):	(85) Pedalcyclist or other nonmotorist—unknown
	(00)	location (specify):
	(99) Unknown	Object or Animal
22	Critical Precrash Event <u>6</u> 7	(87) Animal in roadway
3Z.	This Vehicle Loss of Control Due To:	(88) Animal approaching roadway
	(01) Blow out or flat tire	(89) Animal—unknown location
	(02) Stalled engine	(90) Object in roadway
	(03) Disabling vehicle failure (e.g., wheel fell off)	(91) Object approaching roadway
	(specify):	(92) Object—unknown location
	(04) Non-disabling vehicle problem (e.g., hood flew	(98) Other critical precrash event (specify):
	up) (specify):	
	(05) Poor road conditions (puddle, pot hole, ice, etc.)	(99) Unknown
	(specify):	
	(06) Traveling too fast for conditions	
	(08) Other cause of control loss (specify):	

(09) Unknown cause of control loss

	Attempted Avoidance Maneuver (00) No driver present (01) No avoidance maneuver (02) Braking (no lockup) (03) Braking (lockup) (04) Braking (lockup unknown) (05) Releasing brakes (06) Steering left (07) Steering right (08) Braking and steering left (09) Braking and steering right (10) Accelerating (11) Accelerating and steering right (12) Accelerating and steering right (98) Other action (specify): (99) Unknown Pre-Impact Stability (0) No driver present (1) Tracking (2) Skidding longitudinally—rotation less than 30 degrees	35. Pre-Impact Location (0) No driver present (1) Stayed in original travel lane (2) Stayed on roadway but left original travel lane (3) Stayed on roadway, not known if left original travel lane (4) Departed roadway (5) Remained off roadway (6) Returned to roadway (7) Entered roadway (9) Unknown 36. Accident Type (Note: Applicable codes on back of this page) (00) No impact Code the number of the diagram that best describes the accident circumstance (98) Other accident type (specify):
34.		
	The state of the s	(99) Unknown
1	(3) Skidding laterally—clockwise rotation	
	(4) Skidding laterally—counterclockwise rotation	
	(7) Other vehicle loss-of-control (specify):	
	(9) Precrash stability unknown	·
_		

STOP HERE IF GV07 DOES NOT EQUAL 01 - 49

Cate	Configur	ACCIDENT TYPES (includes intent)	
\$11.	A Right Roadside Departure	DRIVE OFF CONTROL/ AVOID COLLISION SPECIFICS OTHER	05 SPECIFICS UNKNOWN
Single Driver	B Left Roadside Departure	DRIVE OFF CONTROL AVOID COLLISION SPECIFICS OTHER	10 SPECIFICS UNKNOWN
-	C Forward Impact	PARKED VEH. STA. OBJECT PEDESTRIAN/ END SPECIFICS OTHER	16 SPECIFICS UNKNOWN
je na je	D Rear-End	20 21 24 28 28 30 (EACH • 3) STOPPED SLOWER DECEL. 21. 22. 23 28. 20. 31 SPECIFICS OTHER	2) (EACH + 33) SPECIFICS UNKNOWN
II Sane Trafficway Sane Direction	E Forward Impact	CONTROL/ TRACTION LOSS CONTRO	
-	F Sideswipe Angle		ACH • 49) ROMES UNKNOWN
1) In 10	G Head-On	SO 51 (EACH • 52) (EACH • 53) SPECIFICS SPECIFICS UNKNOWN	
Same Trailicway Oppunite Ditection	H Forward Impact	CONTROL/ TRACTION LOSS TRACTION LOSS WITH VEH. METER SE CONTROL/ ST CONTROL/ TRACTION LOSS WITH VEH. METER SE CONTROL/ WITH OBJECT OTHER	
=	l Sideswiper Angle	(EACH • 67) SPECIFICS SPECIFICS UNKNOWN LATERAL MOVE OTHER	
Change Trafficway Vehick Turning	J. Turn Across Path	MITTAL OPPOSITE INITIAL SAME DIRECTIONS SPECIAL OTHER	
JV Change Trafficw Vehicle Turning	K. Turn into Path		
V Increed ing Paths (Vehicle Damage)	L. Straight Paths	SS (EACH = SD) (EACH = SD) (EACH = SD) (EACH = SD) (EACH = SD) (EACH = SD) (EACH = SD) (EACH = SD)	H • 91) HCS UNKNOWN
VI Miscel	M. Backing Eic	SI SI SE Other Accident Type OR OBJECT SE Unknown Accident Type ON No Impect	p 4

Code weight to nearest (0) Driver not present (1) Driver present (1) Unknown 38. Number of Occupants This Vehicle (00-96) Code actual number of occupants for this vehicle (99) Unknown 39. Number of Occupant Forms Submitted AIR BAG RELATED 40. Is this an AOPS Vehicle? (1) Yes - researcher determined (2) Vin determined air bag system (3) Vin determined air bag system (3) Vin determined air bag system (3) Vin determined air bag system (1) No air bags deployed (3) Driver air bag deployed (4) Driver air bag deployed (5) Driver and passenger side deployed (6) Driver and passenger side deployed (7) Driver and passenger side deployed (8) Air Bag(s) Deployment, Other Than First Seat Frontal (1) Not equipped with an "other" air bag (1) Not equipped with an "other" air bag (1) Deployed during accident (as a result of impact) (2) Deployed during accident (as a result of impact) (2) Deployed, details unknown (3) Deployed, details unknown (4) Deployed during accident (as a result of impact) (2) Deployed details unknown (3) Deployed, details unknown (4) Deployed during accident (as a result of impact) (2) Deployed, details unknown (3) Deployed, details unknown (4) Deployed, details unknown (5) Deployed, details unknown (6) Not equipped with an "other" air bag deployed (7) Driver and passenger side deployed (8) Air bag(s) Deployment, Other Than First Seat Frontal (99) Unknown (99) Unknown (99) Unknown (99) Unknown (99) Unknown (99) Unknown (1) Not equipped with an "other" air bag deployed or on tavalish and unknown (9) Unknown (1) Not equipped with an "other" air bag deployed (1) On roadway (1) On shoulder—unpawd (2) On shoulder—unpawd (3) On shoulder—unpawd (4) Driver and passenger side deployed (1) On roadway (2) On shoulder—unpawd (3) On shoulder—unpawd (4) Driver and passenger side deployed (1) On roadway (2) On shoulder—unpawd (3) On shoulder—unpawd (4) Driver and passenger side deployed (1) On roadway (2) On shoulder—unpawd (3) On shoulder—unpawd (4) Driver and passenger side unknown (1) On roadway (2) On shoulder—u
38. Number of Occupants This Vehicle (OO-96) Code actual number of occupants for this vehicle (97) 97 or more (99) Unknown 39. Number of Occupant Forms Submitted AIR BAG RELATED 40. Is this an AOPS Vehicle? (O) No (includes unknown) (1) Yes - researcher determined (2) ViN determined air bag system (3) ViN determined automatic (passive) belts (4) ViN determined automatic (passive) belts (4) ViN determined automatic (passive) belts (6) No requipped or not available (7) Driver air bag deployed (8) Driver air bag, unknown if deployed (9) Driver air bag deployed (10) Driver air bag deployed (11) Driver air bag deployed (12) Driver air bag deployed (13) Driver air bag deployed (14) Driver and passenger side deployed (15) Passenger side only deployed (16) Driver and passenger side unknown if deployed (17) Driver and passenger side unknown if deployed (18) Air bag(s) Deployment, Other Than First Seat Frontal (19) Unknown (19) Unknown (20) Fill-over (101) Trip-over (102) Fill-over (103) Turn-over (104) Climb-over (105) Fall-over (106) Bounce-over (107) Collision with another vehicle (18) Driver and passenger side unknown if deployed (19) Unknown (19) Unknown (10) Not equipped with an "other" air bag (10) Deployed during accident (as a result of impact) (10) Not equipped with an "other" air bag (11) Deployed inadvertently just prior to accident (as Deployed, details unknown (42) Deployed, details unknown (43) Deployed disals unknown (44) Driver air bag deployed (55) Fall-over (66) Bounce-over (67) Fill ode the number of quarter turns (68) Rollover-end-over-end (79) Unknown (701) Trip-over (702) Fill-over (703) Turn-over (703) Turn-over (704) Climb-over (705) Fall-over (706) Bounce-over (707) Collision with another vehicle (708) Other rollover initiation type specify): (709) Unknown rollover initiation type specify): (701) Trip-over (702) Fill-over (703) Turn-over (703) Turn-over (704) Climb-over (705) Fall-over (706) Bounce-over (707) Collision with another vehicle (708) Other rollover initiation type specify): (709)
AIR BAG RELATED 40. Is this an AOPS Vehicle? (0) No (includes unknown) (1) Yes - researcher determined (2) VIN determined air bag system (3) VIN determined air bag system (3) VIN determined air bag and automatic (passive) belts (4) VIN determined air bag and automatic (passive) belts (6) No air bags deployed (7) Driver air bag deployed (8) Driver air bag unknown if deployed (8) Driver and passenger side only deployed (8) Driver and passenger side deployed (7) Driver and passenger side unknown if deployed (8) Air bag(s) deployed, details unknown (9) Unknown 42. Air Bag(s) Deployment, Other Than First Seat Frontal (9) No rollover (no overturning) (01-16) Code the number of quarter turns (specify): (98) Rollover, 17 or more quarter turns (specify): (98) Rollover-end-over-end (i.e., primarily about the lateral axis) (99) Rollover (overturn), details unknown (101) Trip-over (102) Filp-over (103) Turn-over (104) Climb-over (105) Fall-over (106) Sounce-over (107) Collision with another vehicle (108) Other rollover initiation type specify): (109) Rollover-end-over-end (i.e., primarily about the lateral axis) (99) Rollover (primarily about the lateral axis) (99) Rollover (overturn), details unknown (101) Trip-over (102) Filp-over (103) Turn-over (104) Climb-over (105) Fall-over (106) Sounce-over (107) Collision with another vehicle (108) Other rollover initiation type specify): (109) Unknown rollover initiation type specify): (101) Trip-over (102) Filp-over (103) Turn-over (105) Fall-over (106) Bounce-over (107) Collision with another vehicle (108) Other rollover initiation type specify): (109) Unknown rollover initiation type specify: (101) Trip-over (102) Filp-over (103) Turn-over (105) Fall-over (106) Bounce-over (107) Collision with another vehicle (108) Other rollover initiation type specify: (109) Unknown rollover initiation type specify: (109) Unknown rollover initiation type specify: (109) Unknown rollover initiation type specify: (109) Unknown rollover initiation type specify: (109) Unknown rollover (109) Unk
40. Is this an AOPS Vehicle? (0) No (includes unknown) (1) Yes - researcher determined (2) VIN determined air bag system (3) VIN determined air bag system (4) VIN determined air bag and automatic (passive) belts (4) VIN determined air bag and automatic (passive) belts (6) Not equipped or not available (7) No air bags deployed (8) Driver air bag deployed (9) Driver air bag deployed (10) Driver and passenger side only deployed (11) Passenger side only deployed (12) Driver and passenger side unknown if deployed (13) Driver and passenger side unknown if deployed (14) Driver and passenger side unknown if deployed (15) Passenger side only deployed (16) Driver and passenger side unknown (17) Driver and passenger side unknown (18) Unknown (19) Unknown (19) Unknown (20) Not equipped with an "other" air bag (10) Not equipped during accident (as a result of impact) (21) Deployed inadvertently just prior to accident (as a result of a noncollision event during accident sequence (e.g., fire,
(2) VIN determined air bag system (3) VIN determined automatic (passive) belts (4) VIN determined air bag and automatic (passive) belts (5) Not equipped or not available (6) Driver air bag deployed (7) Driver and passenger side deployed (8) Air bag(s) deployed, details unknown if deployed (8) Air bag(s) deployed, details unknown if deployed (9) Rollover (overturn), details unknown (00) No rollover (01) Trip-over (02) Filip-over (03) Turn-over (04) Climb-over (05) Fall-over (06) Bounce-over (07) Collision with another vehicle (08) Other rollover initiation type specify): (10) No rollover (11) On roadway (12) On shoulder—paved (13) On shoulder—paved (14) On roadside or divided trafficway median (15) Rollover-end-over-end (16) Bounce-over (17) Collision with another vehicle (18) Other rollover initiation type (19) Rollover (overturn), details unknown (10) No rollover (10) No rollover (10) No rollover (11) On roadway (12) On shoulder—paved (13) On shoulder—paved (14) On roadside or divided trafficway median (15) Rollover-end-over-end (16) Bounce-over (17) Collision with another vehicle (18) Other rollover initiation type (19) Unknown rollover (19) Unknown (19) Unknown (20) No rollover (10) No rollover (10) No rollover (10) Rorlover (10) No rollover (10) Rollover-end-over-end (10) No rollover (10) Rollover-end-over-end (10) No rollover (10) Rollover-end-over-end (10) No rollover (10) Rollover-end-over-end (10) No rollover (11) On roadway (12) On shoulder—paved (13) On shoulder—unpaved (14) On roadside or divided trafficway median (15) Unknown (18) Rollover Initiation Object Contacted (19) Unknown (19) Unknown (19) Unknown (20) Not equipped with an "other" air bag (21) On shoulder—paved (22) On shoulder—unpaved (23) On shoulder—unpaved (24) On roadside or divided trafficway median (25) Unknown (26) Rollover (other initiation type
41. Air Bag(s) Deployment, First Seat Frontal (O) Not equipped or not available (1) No air bags deployed Single Air Bag Vehicle (2) Driver air bag deployed (3) Driver air bag, unknown if deployed Multiple Air Bag Vehicle (4) Driver side only deployed (5) Passenger side only deployed (6) Driver and passenger side deployed (7) Driver and passenger side unknown if deployed (8) Air bag(s) deployed, details unknown (9) Unknown 42. Air Bag(s) Deployment, Other Than First Seat Frontal (O) Not equipped with an "other" air bag (1) Deployed during accident (as a result of impact) (2) Deployed inadvertently just prior to accident during accident sequence (e.g., fire, (02) Filip-over (03) Turn-over (04) Climb-over (05) Fall-over (06) Bounce-over (07) Collision with another vehicle (08) Other rollover initiation type specify): (98) Rollover-end-over-end (99) Unknown rollover initiation type 47. Location of Rollover Initiation (0) No rollover (1) On roadway (2) On shoulder—paved (3) On shoulder—paved (4) On roadside or divided trafficway median (8) Rollover-end-over-end (9) Unknown 48. Rollover Initiation Object Contacted (Note: Applicable codes on back of page) 49. Location on Vehicle Where Initial Principal Tripping Force Is Applied
(2) Driver air bag deployed (3) Driver air bag, unknown if deployed **Multiple Air Bag Vehicle** (4) Driver side only deployed (5) Passenger side only deployed (6) Driver and passenger side deployed (7) Driver and passenger side unknown if deployed (8) Air bag(s) deployed, details unknown (9) Unknown 42. Air Bag(s) Deployment, Other Than First Seat Frontal (0) Not equipped with an "other" air bag (1) Deployed during accident (as a result of impact) (2) Deployed inadvertently just prior to accident (3) Deployed, details unknown (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire,
(5) Passenger side only deployed (6) Driver and passenger side deployed (7) Driver and passenger side unknown if deployed (8) Air bag(s) deployed, details unknown (9) Unknown 42. Air Bag(s) Deployment, Other Than First Seat Frontal (0) Not equipped with an "other" air bag (1) Deployed during accident (as a result of impact) (2) Deployed inadvertently just prior to accident during accident sequence (e.g., fire, (99) Unknown rollover initiation type 47. Location of Rollover Initiation (0) No rollover (1) On roadway (2) On shoulder—paved (3) On shoulder—unpaved (4) On roadside or divided trafficway median (8) Rolloverend-over-end (9) Unknown (9) Unknown (1) Deployed during accident (as a result of impact) (2) Deployed inadvertently just prior to accident (Note: Applicable codes on back of page) 48. Rollover Initiation Object Contacted (Note: Applicable codes on back of page) 49. Location on Vehicle Where Initial Principal Tripping Force Is Applied
42. Air Bag(s) Deployment, Other Than First Seat Frontal (0) Not equipped with an "other" air bag (1) Deployed during accident (as a result of impact) (2) Deployed inadvertently just prior to accident (3) Deployed, details unknown (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire,
(2) Deployed inadvertently just prior to accident (3) Deployed, details unknown (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, (Note: Applicable codes on back of page) 49. Location on Vehicle Where Initial Principal Tripping Force Is Applied
(5) Unknown if deployed (1) Wheels/tires (7) Nondeployed (2) Side plane (9) Unknown (3) End plane
Specify type of "other" air bag present: (4) Undercarriage (5) Other location on vehicle (specify):
(6) Non-contact rollover forces (specify):
VEHICLE WEIGHT ITEMS (8) Rollover-end-over-end (9) Unknown
43. Vehicle Curb Weight Code weight to nearest 10 kilograms. (045) Less than 450 kilograms (610) 6,100 kilograms or more (999) Unknown 3.273 lbs x.4536 = 1,484 kgs Source: 94 Brankoms 5 higher Source: 94 Brankoms 5 higher Direction of Initial Roll (0) No rollover (1) Roll right - primarily about the longitudinal axis (2) Roll left - primarily about the longitudinal axis (8) Rolloverend-over-end (9) Unknown roll direction

OVERRIDE/UNDERRIDE (THIS VEHICLE)	ACCIDENT RECONSTRUCTION PROGRAMS HIGHEST DELTA V
51. Front Override/Underride (this Vehicle)	A 1
52. Rear Override/Underride (this Vehicle) (0) No override/underride, or not an end-to-end impact between two CDS applicable vehicles, and no medium/heavy truck or bus underride	58. Basis for Total (Resultant) Delta V (highest) (00) No vehicle inspection
Override (see specific CDC) (Between 2 CDS applicable vehicles (Bodytype, GV07 = 1-49)) (1) 1st CDC (2) 2nd CDC (3) Other not automated CDC (specify): ———————————————————————————————————	Delta V Calculated (O1) Reconstruction program -damage only routine (O2) Reconstruction program -damage and trajectory routine (O3) Missing vehicle algorithm
[Between 2 CDS applicable vehicles (Bodytype, GV07 = 1-49)] (4) 1st CDC (5) 2nd CDC (6) Other not automated CDC (specify):	(04) At least one vehicle (which may be this vehicle) is beyond the scope of an acceptable reconstruction program, regardless of collision conditions.
(7) Medium/heavy truck or bus override (of any configuration)(9) Unknown	All vehicles within scope (CDC applicable) of reconstuction program but one of the collision conditions is beyond the scope of the
HEADING ANGLE AT IMPACT FOR HIGHEST DELTA V	reconstruction program or other acceptable reconstruction technique, regardless of adequacy
Values: (000)-(359) Code actual value (997) Noncollision (998) Impact with object (999) Unknown 53. Heading Angle For This Vehicle 54. Heading Angle For Other Vehicle RECONSTRUCTION DATA 55.Towed Trailing Unit	of damage data. (05) Rollover (06) Other non-horizontal forces (07) Sideswipe type damage (08) Severe override (09) Yielding object (10) Overlapping damage (11) All vehicle and collision conditions are within scope of one of the acceptable reconstruction programs, but there is
(0) No towed unit (1) Yes—towed trailing unit (9) Unknown	insufficient data available, (specify):
56. Documentation of Trajectory Data for This Vehicle (0) No (1) Yes	(98) Other, (specify):
57. Post Collision Condition of Tree or Pole (For Highest Delta V) (0) Not collision (for highest delta V) with tree or pole (1) Not damaged (2) Cracked/sheared (3) Tilted < 45 degrees (4) Tilted ≥ 45 degrees (5) Uprooted tree (6) Separated pole from base (7) Pole replaced (8) Other (specify):	

COMPUTER GENERAT	ED CRASH SEVERITY
Searest kmph (highest) Nearest kmph (secondary) (NOTE: 000 means less than 0.5 kmph) (160)159.5 kmph and above (999)Unknown Highest Delta V Nearest kmph (highest) Nearest kmph (secondary)	Highest 63. Impact Speed Nearest kmph (highest) Nearest kmph (secondary) (NOTE: 000 means less than 0.5 kmph) (160) 159.5 kmph and above (998) Trajectory algorithm not run (999) Unknown DELTA V CONFIDENCE LEVEL 64. Confidence In Reconstruction Program Results (For Highest Delta V)
(NOTE: _000 means greater than _0.5 kmph and less than +0.5 kmph) (±160) ±159.5 kmph and above (_999) Unknown Highest	 (0) No reconstruction (1) Collision fits model — results appear reasonable (2) Collision fits model — results appear high (3) Collision fits model — results appear low (4) Borderline reconstruction — results appear reasonable OTHER SPEED ESTIMATE
Nearest kmph (highest) Nearest kmph (secondary) (NOTE:000 means greater than -0.5 kmph and less than +0.5 kmph) (±160) ±159.5 kmph and above (_999) Unknown	Highest 65. Barrier Equivalent Speed
62. Energy Absorption O J 7, 5 0 0 39487 Nearest 100 joules (highest) Nearest 100 joules (secondary) (NOTE: 0000 means less than 50 joules) (9997) 999,650 joules or more (9999) Unknown	
IS MISSING VEHICLE ALGORITHM APPLICATION OF THE SERVICE OF THE SER	

ESTIMATED DELTA V	VEHICLE INSPECTION						
66. Estimated Highest Delta V (Researcher Determined) (0) Reconstruction Delta V coded Estimated Delta V (1) Less than 10 kmph (2) ≥ 10 kmph but < 25 kmph (3) ≥ 25 kmph but < 40 kmph (4) ≥ 40 kmph but < 55 kmph (5) ≥ 55 kmph Other estimates of damage severity (6) Minor (7) Moderate (8) Severe (9) Unknown	67. Type of Vehicle Inspection (0) No inspection (1) Vehicle fully repaired-no damage evident (2) Partial inspection (specify): (3) Complete inspection						

••• IF THE CDS APPLICABLE VEHICLE WAS NOT INSPECTED (I.E., GV67=0), •••

DO NOT COMPLETE THE EXTERIOR AND INTERIOR VEHICLE FORMS

*** IF GV07 DOES NOT EQUAL 01-49, DO NOT COMPLETE ***

THE EXTERIOR VEHICLE, INTERIOR VEHICLE,

OCCUPANT ASSESSMENT, AND OCCUPANT INJURY FORMS.



0												
•	nt of Transportation	EX	TERIOR	VEHI	CLE F	ORM	N.		CCIDENT			
1. Prima	ry Sampling Unit Nu Number - Stratum	mber	51	O 3	. Vehicl	e Numb	er	_		0		
			VEHICLE	IDENTI	FICAT	ION					-	
	<u> </u>							_		ear \mathcal{G}	4	
Vehicle Ma	ake (specify):	CURA	4	Vehicle Model (specify): V/GOR GS								
			L	OCATO)R							
	e end of the damage amaged axle for side		ct to the ve	hicle lon	gitudina	i center	line or t	oumper	corner fo	or end ir	npacts	
Specific Impa	ect No. Location of	of Direct Dama	ge	Location of Field L					Location of Max Crush			
01 9cm in t		from	(L)BC	ACROSS whole bumpe					C-1			
							·					
	CRUSH PROFILE IN CENTIMETERS											
	dentify the plane at ill, etc.) and label ad				e taken	(e.g., at	bumpe	r, above	e bumpe	r, at sill	, above	
	Measure C1 to C6 fr mpacts.	om driver to	o passenge	r side in	front or	rear im	pacts a	nd rear 1	to front	in side		
Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.												
ι	Jse as many lines/co	olumns as n	ecessary to	describ	e each o	damage	profile.					
Specific Impact Number	Plane of Impact C-Measurements	Direct D Width (CDC)	amage Max Crush	Field	c,	C ₂	C ₃	C.	C₅	C ₆	±D	
1	@ Bumper	140		147	41	25	19	15	17.5	24	+7	
	FREE				15	7	2	15	7	15		
	FINAL				26	18	17	13	105	9	+7	
			i	1	-							

1	(a) Bumper	140		147	4/	25	19	15	17.5	24	+7
	FREE	_			15	7	.~	15	7	.5	
	@ Bumper FREE FINAL				26	18	17	13	105	9	+7
				}							
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				<u> </u>							
											
0.5	\ /Pay 1/05\		L	L	<u> </u>	L	L	L	L	L	I

ORIGINAL SPECIFICATIONS WORK SHEET

Wheelbase	110.4	inches	x	2.54	=	<u> 280</u> cm
Overall Length	190.4	inches	x	2.54	=	<u>483</u> cm
Maximum Width	70.1	inches	x	2.54	=	<u> 178</u> cm
Auto Curb Weight News	3,142	pounds	x	0.4536	= _	1,425 kg
49.8 Average Track	59.6	inches	x	2.54	=	<u> 151</u> cm
Front Overhang		inches	x	2.54	=	<u>85</u> cm
Rear Overhang		inches	x	2.54	=	<u> 1 1 6 cm</u>
Undeformed End Width		inches	x	2.54	=	<u> </u>
Engine Size: cyl/displ.		cc	x	0.001	=	2.5 L
	150	CID	x	0.0164	=	L
5- passengers, 4	doors					
Branham's Sh	ipping Weigh	√Î .3	,~	73 Jbs	,	, 439 kg
1994 Acura Vi	gor GS	•	, , 10			
		3,	27	3	1,	485 kg

SPECIAL CRASH INVESTIGATION ADDENDUM

Submodel Designation: {specify} G S Color: {specify} Black Repair Cost: \$
Transmission: {dirde} (Automatic) Manual Speed: 3-speed (4-speed) 5-speed Other:
Steering: {circle} Power-assisted Manual Type: rack-and-pinion worm-and-gear Other
{please describe}:
Brakes: {circle} Power-assisted Manual Type: 4-wheel disc 4-wheel drum 4-wheel hydraulic front disc, rear drum Other:
Observed Defects: {specify}
Fleet Type: {circle} Private vehicle Rental vehicle Leased vehicle Commercial vehicle Other

	VEHICLE DAMAGE SKETCH	
TIRE—WHEEL DAMAGE a. Rotation physically b. Tire restricted deflated RF Z RF Z LF Z LF Z LF Z LR Z LR Z LR Z	ORIGINAL SPECIFICATIONS Wheelbase 380 cm Overall Length 484 cm Maximum Width 178 cm Curb Weight 1425 kg Average Track 151- cm Front Overhang 85 cm Rear Overhang 110 cm Undeformed End Width 1123 cm Engine Size: cyl./displ. 5cyl.2.5 L	WHEEL STEER ANGLES (For locked front wheels or displaced rear axles only) RF ± o LF ± o RR ± o LR ± o Within ± 5 degrees DRIVE WHEELS FWD □ RWD □ 4WD Approximate Cargo Weight kg
☐ Yes 💆 No	MEASUREMENTS IN CENTIMETERS	
	BC 108 275 33 275 34 275 35 275 36 116 And the direct damage and single hatch induced damage on all views. All grass in tire bead, direction of striations, scuff on sidewalls, etc.).	
Annotate any damage caused by ex	trication such as component removal by torching, prying, or hydraul	c shears.

EH616R 93.3" 157.3" x 66.7" x 49.4" 2351

EJ112R 103.2" 172.8" x 66.9" x 50.9" 2371

EJ113R 103.2" 172.8" x 66.9" x 50.9" 2415

EH338R 101.3" 160.2" x 66.9" x 50.7" 2327

EH339R 101.3" 160.2" x 66.9" x 50.7" 2371

EH959R 103.2" 173.0" x 66.9" x 51.7" 2459

EH626R 93.3" 157.3" x 66.7" x 49.4" 2411

EJ122R 103.2" 172.8" x 66.9" x 50.9" 2439

EJ123R 103.2" 172.8" x 66.9" x 50.9" 2483

EH969R 103.2" 173.0" x 66.9" x 51.7" 2512

CD552R 106.9" 184.0" x 70.1" x 55.1" 2699

CD551R 106.9" 184.0" x 70.1" x 55.1" 2732

CD553R 106.9" 184.0" x 70.1" x 55.1" 2809

CD554R 106.9" 184.0" x 70.1" x 55.1" 2842

CD712R 106.9" 184.0" x 70.1" x 54.7" 2655

CD711R 106.9" 184.0" x 70.1" x 54.7" 2689

CD713R 106.9" 184.0" x 70.1" x 54.7" 2853

CD714R 106.9" 184.0" x 70.1" x 54.7" 2754

CE172R 106.9" 187.8" x 70.1' x 55.9" 2975

CE173R 106.9" 187.8" x 70.1' x 55.9" 3008

CD562R 106.9" 184.0" x 70.1" x 55.1" 2765

CD561R 106.9" 184.0" x 70.1" x 55.1" 2798

CD563R 106.9" 184.0" x 70.1" x 55.1" 2875

CD564R 106.9" 184.0" x 70.1" x 55.1" 2908

CD722R 106.9" 184.0" x 70.1" x 54.7" 2721

CD721R 106.9" 184.0" x 70.1" x 54.7" 2798

CD723R 106.9" 184.0" x 70.1" x 54.7" 2787

CD724R 106.9" 184.0" x 70.1" x 54.7" 2820

CE182R 106.9" 187.8" x 70.1' x 55.9" 3041

EH235R 101.3" 160.2" x 66.9" x 50.7" 2051 13.92 9.500

EH237R 101.3" 160.2" x 66.9" x 50.7" 2043 13.92 11.620

EG217R 93.3" 157.3" x 66.7" x 49.4" 2428 16.28 17.900

Dimensions

Inches

Lt x Wt x Ht

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H.P.

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Ca 90501

P.O.E. West

Coast

16 450

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14 600

13,300

14,150

15,920

17 200

14,500

15 350

16,670

14,480

15 430

17,400

18,350

14 280

15,230

17,200

18,150

18,370

19,320

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P.O.E.

East

Coast

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13,300

14,150

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15,350

16,670

9.500

11,620

17,900

14,480

15.430

17,400

18,350

14 280

15,230

17.200

18,150

18,370

19 320

15,230

16.180

18 150

19 100

15,030

15.980

17,950

18,900

19.120

American HONDA Motor Co., 1

Man. trans. 5-speed; EPA Mileage Estimate 29/35

Auto, Trans. 4-speed; EPA Mileage Estimate 26/33

Man. Trans, 5-speed; EPA Mileage Estimate 26/30

Model

1994 CIVIC FWD 4 cyl 1.5 liter SOHC PGMFI Gas Engine(8valve)

Man. trans. 5-speed; EPA Mileage Estimate (49-state)42/46 (CA)40/45

Man. Trans. 5-speed; EPA Mileage Estimate (49-state) 47/56 (CA) 44/51

Man. Trans. 5-speed; EPA Mileage Estimates 25/31 (Wagon 24/30)

Auto, Trans. 4-speed; EPA Mileage Estimates 23/29 (Wagon 21/27)

Base

Bore & Stroke 2.95"x3.33", Tax H.P. 13.92; Net H.P. 70@5000; Torque 91@2000; 91.1 cu.in., 1.5 liter

1994 CIVIC FWD 4 cyl 1.5 liter SOHC PGMFI Gas Engine(16 valve)(VTEC-E) Bore & Stroke 2.95"x3.33", Tax H.P. 13.92; Net H.P. 92@5500; Torque 97@4500 91.1 cu.in., 1.5 liter

1994 Civic FWD 4L cyl 1.6 liter DOHC PGMFI Gas Engine(16 valve)(VTEC) Bore & Stroke 3.19x3.05; Tax H.P. 16.28; SAE H.P. 160@7600; Torque 111@7000; 97 cu.in., 1.6 liter

1994 ACCORD FWD 4 cyl 2.2 liter SOHC PGMFI Gas Engine(16 valve) Bore & Stroke 3.35x3.75; Tax H.P. 17.96; SAE H.P. 130@5300; Torque 139@4200; 132 cu.in, 2.2 liter

Type of Body

Pass. Cap.

2-PS 2-dr del Sol Si

5-PS 2-dr Coupe EX

2-PS 2-dr sel Sol Si

5-PS 2-dr Coupe EX

5-PS 4-dr Sedan EX

5-PS 2-dr Coupe EXA

5-PS 3-dr Hatchback CX

5-PS 3-dr Hatchback VX

2-PS 2-dr del Sol VTEC

5-PS 4-dr Sedan DX

5-PS 4-dr Sedan LX

5-PS 2-dr Coupe DX

5-PS 2-dr Coupe LX

5-PS 5-dr Wagon LX

5-PS 4-dr Sedan DX

5-PS 4-dr Sedan I X 5-PS 4-dr Sedan LXA w/ABS

5-PS 2-dr Coupe DX

5-PS 2-dr Coupe LX

5-PS 5-dr Wagon LX

5-PS 4-dr Sedan DXA w/ABS

5-PS 4-dr Sedan LXA w/ABS

5-P\$ 2-dr Coupe DXA w/ABS

5-PS 2-dr Coupe LXA w/ABS

5-PS 5-dr Wagon LXA w/ABS

5-PS 4-dr Sedan DXA w/ABS

5-PS 2-dr Coupe DXA w/ABS

5-PS 2-dr Coupe LXA w/ABS

5-PS 2-dr Coupe EXA

5-PS 3-dr Hatchback Si

5-PS 3-dr Hatchback SiA 5-PS 4-dr Sedan EX

5-PS 5-dr Wagon LXA w/ABS	CE183R	106.9"	187.8" x 70.1' x 55.9"	3074	17.96	20,070	20,070
1994 ACCORD FWD 4 cyl 2	2.2 liter S	онс і	PGMFI Gas Engine	(16 va	ive)(VT	EC)	
Bore & Stroke 3.35x3.75; Tax H.P.							
Man. Trans. 5-speed; EPA Mileage	Estimates	25/31(W	agon 25/31)				
5-PS 4-dr Sedan EX	CD555R	106.9"	184.0" x 70.1" x 55.1"	2908	17.96	19,950	19,950
5-PS 4-dr Sedan EXL w/Leather	CD556R	106.9"	184.0" x 70.1" x 55.1"	2908	17.96	21,000	21,000
5-PS 2-dr Coupe EX	CD715R	106.9"	184.0" x 70.1" x 54.7"	2853	17.96	19,750	19,750
5-PS 2-dr Coupe EXL w/Leather	CD716R	106.9"	184.0" x 70.1" x 54.7"	2853	17.96	20,800	20,800
5-PS 5-dr Wagon EX	CE179R	106.9"	187.8" x 70.1' x 55.9"	3041	17.96	20,970	20,970
Auto, Trans, 4-speed; EPA Mileage	Estimates	23/30 (V	Vagon 23/29)				
5-PS 4-dr Sedan EX	CD565R	106.9"	184.0" x 70.1" x 55.1"	2974	17.96	20,700	20,700
5-PS 4-dr Sedan EXL w/Leather	CD566R	106.9"	184.0" x 70.1" x 55.1"	2974	17.96	21,750	21,750
5-PS 2-dr Coupe EX	CD725R	106.9"	184.0" x 70.1" x 54.7"	2919	17.96	20,500	20,500
5-PS 2-dr Coupe EXL w/Leather	CD726R	106.9"	184.0" x 70.1" x 54.7"	2919	17.96	21,500	21,500
5-PS 5-dr Wagon EX	CE189R		187.8" x 70.1' x 55.9"	3096	17.96	21,720	21,720

1994 ACURA NSX RWD V6 cyl 3.0 liter DOHC VTEC PGMFI Gas Engine(24 valve)(VTEC) Bore & Stroke 3.54x3.07; Tax H.P. 30.08; SAE H.P. 270@7100; Torque 210@5300; 181 cu.in, 3.0 liter

- 80 -

BB216R 100.4" 174.8" x 69.5" x 50.8" 2839 - 81 -

BB215R 100.4" 174.8" x 69.5" x 50.8" 2773

18.71

18.71

21,850

24 650

21,850

24,650

4-PS 2-dr Coupe Si

4-PS 2-dr Coupe SHWS

Auto. Trans. 4-speed; EPA Mileage Estimates 22/27

BRANHAM AUTOMOBILE REFERENCE BOOK-FOREIGN CAR SECTION								
American HONDA Mot	tor Co.,	TURE	Arrent		a Toe		905	01
				nsions	Ship.		P.O.E.	P.O.E.
Type of Body		Wheel	Inc	:hes	Wt.	Tax	West	East
Pass. Cap.	Model	Base	Lt. x V	Vt. x Ht.	lb.	H.P.	Coast	Coast
Man. Trans 5-speed; EPA Mileage								
2-PS 2-dr Sport NSX 2-PS 2-dr Sport NSX	NA115R	99.6"	174.2" x 71 174.2" x 71	.3" x 46.1"	2923	30.08 30.08	75,000	75,000
Bore & Stroke 3.54x3.07; Tax H.P.	NA116R	99.0 HP 263	1/4.4 X / I XONGSOON: To	.3 X 40.1 mua 21069	5300-18		∩ liter	
Auto. Trans ; EPA Mileage Estimat		. 11.7 . 202	ag 0000, 10	ique z roes	,5500, 10		O INCI	
2-PS 2-dr Sport NSX	NA125R	99.6"	174.2" x 71	.3" x 46.1"		30.08		
2-PS 2-dr Sport NSX	NA126R	99.6"	174.2" x 71	.3" x 46.1"	3012	30.08	79,000	79,000
1994 ACURA LEGEND FW	ID VE cul	3 2 1110	r. SUHC	DCMEI (Gee En	aine/24	valval	
Bore & Stroke 3.54"x3.31"; Tax H.I	P 30 08 SA	FHP 2	00@5500: T	orque 210	Ø4500 1	96 cu im	3.2 liter	
Man. Trans. 5-speed; EPA Mileage	Estimates	18/25	-	•	-			
5-PS 4-dr Sedan LC	KA755R	114.6"	194.9" x 71 194.9" x 71	.3" x 55.1"	3410	30.08	34,160	34,160
5-PS 4-dr Sedan LL	KA756R	114.6"	194.9" x 71	.3" x 55.1"	3410	30.08	35,660	35,660
Auto, Trans. 4-speed; EPA Mileage								
5-PS 4-dr Sedan LC			194.9" x 71			30.08	34,960	34,960
5-PS 4-dr Sedan LL 5-PS 4-dr Sedan LS	KA767D	114.6	194.9" x 71 194.9" x 71	.3" X 55.1"	3454 3477	30.08 30.08	36,460 39,000	36,460
5-P3 4-0r Secian LS	KA/O/K	114.0	194.9 X / 1	.3 X 33.1	34//	30.08	39,000	39,000
1994 ACURA LEGEND FW	/D V6 cyl	3.2 lite	r; SOHC	PGMFI (Gas En	gine(24	valve)	
Bore & Stroke 3.54"x3.31"; Tax H.I			30 @ 6200; 1	orque 206	@ 4500;	196 cu.im.	, 3.2 liter	
Man. Trans. 6-speed; EPA Mileage 5-PS 4-dr Sedan GS	E CSUMBUS KA758D	1146"	194.9" x 71	3" v 55 1"	3465	30.08	41,100	41,100
5-PS 2-dr Coupe L	KAR16R	111.0	1925" x 71	3" x 53.1"	3411	30.08	38,100	38,100
5-PS 2-dr Coupe LS	KA817R	111.4"	192.5" x 71 192.5" x 71	.3" x 53.7"	3433	30.08	41,900	41,900
Auto, Trans, 4-speed; EPA Mileag	e Estimates	18/23					,	,
5-PS 4-dr Sedan GS	KA768R		194.9" x 71			30.08	41,100	41,100
5-PS 2-dr Coupe L	KA826R		192.5" x 71			30.08	38,100	38,100
5-PS 2-dr Coupe LS	KA827R	111.4"	192.5" x 71	.3" x 53.7"	3477	30.08	41,900	41,900
1994 ACURA VIGOR FWD	(5 cvl 2.5	Itted S	OHC PG!	MFI Gas	Engine	(20 val	ve)	
Bore & Stroke 3.35"x3.4"; Tax H.P	22.45, SAI	E H.P. 17	6 @ 6300; To	rque 1706	3900, 1	50 cu.in., 2	2.5 litter	
Man. Trans. 5-speed; EPA Mileage	e Estimates	20/27						
5-PS 4-dr Sedan LS			190.4" x 70			22.45	26,350	26,350
5-PS 4-dr Sedan GS	CC256R	110.4"	190.4" x 70).1" x 52.0"	3107	22.45	28,350	28,35)
Auto. Trans. 4-speed EPA Mileag 5-PS 4-dr Sedan LS	CCOGAD	110 4"	100 4" = 70	14" = 52 O"	2111	22.45	27,100	27,100
5-PS 4-dr Securi GS	CC266R	(110.4")	190.4" x 70 190.4" x 70) 1" x 52.0"	3173	22.45	29,100	29,100
							•	20,700
1994 ACURA INTEGRA FY	ND 4 cyl	1.8 lite	DOHC F	GMFIG	as Eng	ine(16)	valve)	
Bore & Stroke 3.19"x3.5"; Tax H.P Man. Trans. 5-speed; EPA Mileage	: 10.20; SAI e Fetimates	5 M.P. 14 25/31	2 (3 0300, 10	orque 12/6	g5200; 1	12 CU.In.,	1.8 litter	
4-PS 3-dr Coupe RS	DC434R	101.2"	172.4" x 67	3" x 50 8"	2458	16.28	14,980	14,980
4-PS 3-dr Coupe LS			172.4" x 67			16.28	17,650	17,650
5-PS 4-dr Sedan RS	DB754R	103.1"	178.1" x 67	'.3" x 52.1"	2552	16.28	15,740	15,740
5-PS 4-dr Sedan LS			178.1" x 67	7.3" x 52.1"	2632	16.28	17,650	17,650
Auto, Trans. 4-speed; EPA Mileag								
4-PS 3-dr Coupe RS 4-PS 3-dr Coupe LS	DC444R DC445R	101.2	172.4" x 67	7.3" x 50.8"	2499	16.28	15,730	15,730
5-PS 4-dr Sedan RS	DB764R	101.2	172.4" x 67 178.1" x 67	7.3" X 5U.8" 7.3" v 50.4"	2614 2599	16.28 16.28	18,400 16,490	18,400 16,490
5-PS 4-dr Sedan LS	DB765R	103.1	178.1" x 67	7.3" x 52.1"	2674	16.28	18,400	18,400
4004 40110 4 1117500 4							•	
1994 ACURA INTEGRA F	WD 4 cyl	1.8 lite	r DOHC I	PGMFIG	as Eng	ine(16	valve)(V	TEC)
Bore & Stroke 3.19"x3.43"; Tax H. Man. Trans. 5-speed; EPA Mileag	P. 15.25; S/	45 H.P. 1	/U@2/600;	orque 128	103 6200;	109 cu.in.	, 1. liter	
4-PS 3-dr Coupe VTEC GS-R			172.4" x 67	7 3" v 50 8"	2596	16.28	19,850	19,850
5-PS 4-dr Sedan GS-R		103.1"	178.1" x 67	7.3" x 50.0 7.3" x 52.1"	2694	16.28	20,180	20,180
								20,100
1994 PRELUDE SERIES F	WD 4-cy	1 2.2 lite	or SOHC	PGMFI (3as En	gine(16	valve)	
Bore & Stroke 3.35"x3.74"; Tax H.	r. 17.96; S/	NE H.P. 1	35 @ 5200;	Forque 142	@ 4000;	132 cu.in.	, 2.2 liter	
Man. Trans. 5-speed; EPA Mileag 4-PS 2-dr Coupe S			474 0" ~) E" = EO O"	2072	47.00	40 450	40
Auto. Trans. 4-speed; EPA Mileag	DNO 14K e Fetimates	23/28	174.8" x 69	s.o x 50.8"	2672	17.96	18,450	18,450
4-PS 2-dr Coupe S			174.8" x 69	9.5" x 50 A"	2725	17.96	19.200	19,200
1994 PRELUDE SERIES FWD 4-cyl 2.3 liter DOHC PGMFI Gas Engine (16 valve) Bore & Stroke 3.42"x3.74", Tax H.P. 18.71; SAE H.P. 160@5800; Torque 156@4500; 138 cu.in., 2.3 liter								
Man Trans Surped: EDA SHIPS	.r. 15.71; S	REH.P. 1	60 @ 5800;	Torque 156	45 00;	138 cu.in.	, 2.3 liter	
Man. Trans. 5-speed; EPA Mileag 4-PS 2-dr Coupe Si	e Esimples RR215R	100 4"	174 8" - 6	5 5" v 60 9"	2772	10.71	24 050	24.050

110001101 ~	codent campin	ig Oyotoiii Oidsi	140.000								
			CDC \	NORKSHE	ET						
		C	ODES FOR	OBJECT CO	NTACTED						
(Od OO) Makinta Number				15	7) Fence						
(01-30) — Vehicle Number				• -	8) Wall						
Noncol	Alamaniliaian				9) Building						
	Noncollision (31) Overturn — rollover (excludes end-over-end					Ditch or culvert					
	(32) Rollover—end-over-end				1) Ground						
	(33) Fire or explosion					Fire hydrant					
(34) Jackknife					3) Curb						
(35) Other intraunit damage (specify):					4) Bridge						
,,,,		go (opcon	,,,,		8) Other fix	ced object (specify):				
(36)	Noncollision in	jury		•		•					
	Other noncollis			(6	9) Unknow	n fixed obje	ct				
(39)	Noncollision -	- details unknov	vn		sion with No						
				(7			truck, van,	or other			
	n With Fixed Ol					not in-transp		_			
	Tree (≤ 10 cm						c or bus not	in-transport			
	Tree (> 10 cm				2) Pedestri						
	Shrubbery or t	oush			3) Cyclist o						
.(44)	Embankment			(·J·	4) Other no	onmotorist c	r-conveyan	ce ·			
(45)	Breakaway no	le or post (any c	liamatar)	17	5) Vehicle	occupant					
(45)	Dieakaway po	ie or post tally t	nameter/		6) Animal	Vehicle occupant					
Nonbre	akaway Pole or	Post			7) Train						
	Nonbreakaway Pole or Post (50) Pole or post (≤ 10 cm in diameter)					lisconnecte	d in transpo	rt			
(51) Pole or post (\geq 10 cm but \leq 30 cm in							icle in-trans				
diameter)					(88) Other nonfixed object (specify):						
(52)	•	> 30 cm in diam	neter)	(0	o, o		(-				
(52) Pole or post (> 30 cm in diameter) (53) Pole or post (diameter unknown) (89) Unknown nonfixed object											
	•		•	,-							
(54)	Concrete traffi	c barrier		(9	8) Other ev	ent (specify	<i>(</i>):	•			
(55) Impact attenuator											
(56)		arrier (includes g	guardrail)	(9	9) Unknow	n event or o	bject				
	(specify):										
				····			······································				
		DEFORMAT	TION CLASS	IFICATION E	BY EVENT N	UMBER					
					(4)	(5)					
Accident		(1) (2)	le eremental	(3)	Specific	Specific	(6)	/ 7 \			
Sequence	Object	Direction of Force	Incremental Value of	(3) Deformation	Longitudinal or Lateral	Vertical or Lateral	Type of Damage	(7) Deformation			
Number	Contacted	(degrees)	Shift	Location	Location	Location	Distribution	Extent			
01	02	20		F	D	E	ω	01			
			———								
								4			
											
											
						•					
											
				_	_						
	_										

		COLLISION	DEFORMA	TION CLAS	SIFICATIO	N	
HIGHEST D	DELTA "V"						
Accident Event Sequence Number	Object Contacted	(1) (2) Direction of Force	(3) Deformation Location	(4) Longitudinal or Lateral Location	(5) Vertical or Lateral Location	(6) Type of Damage Distribution	(7) Deformation Extent
4. 0 1	5. <u>0</u> 2	6. 0 /	7. <u>F</u>	8	9. <u>E</u>	10. <u>W</u>	11.0/
Second Hig	ghest Delta "V	· n					
12	13	14	15	16	17	18	19
		CRUS	H PROFILE	IN CENTIM	ETERS		
	The crush pro in the appr	file for the dar	nage described below. (ALL M	in the CDC(s)	above should	be documente ITIMETERS.)	ed .
HIGHEST (DELTA "V"						
20. 	21. 				C ₅	C ₆	22.
162	026	018	017	<u>013</u> C	011 0	09	007
Second Hig	ghest Deita "V	·=				·	
23. 	24. 				C ₅	C ₆	25. ±D
							-
(Coded impact (250) (998)	250 centimete	severity e impact.) earest centimet		(650) (999)	Note of the name o		280
27. Direct I (For hig	Damage Width phest severity i	mpact) parest centimet	<u>/ 4 0</u>	(185) (999)	al Average Trace Code to the note of the n	earest	

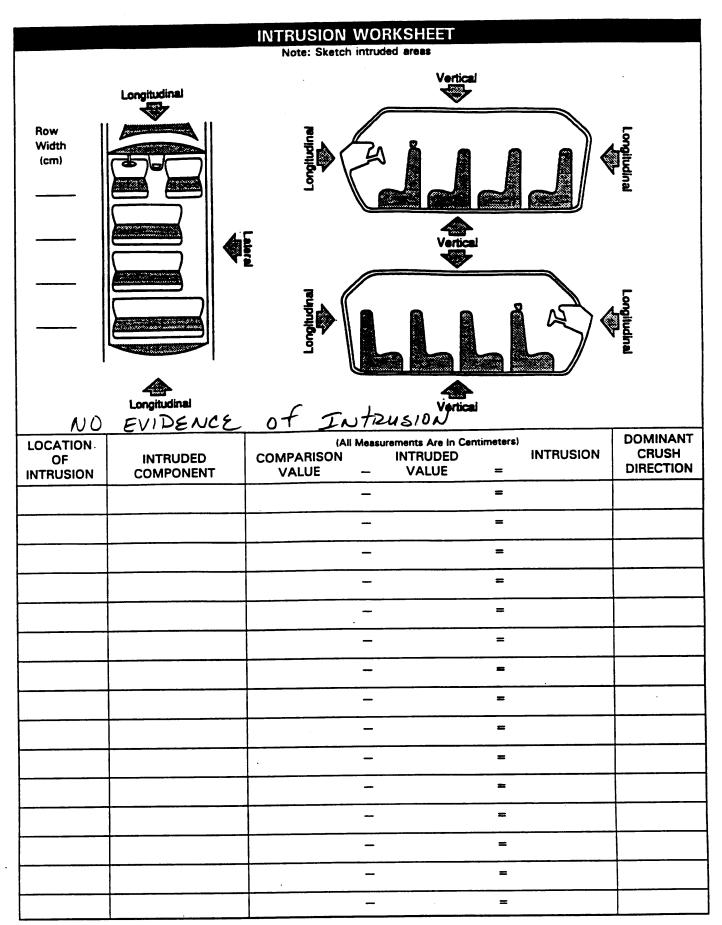
		FUEL SYSTEM
30. Are CDCs Documented	0	35. Location of Fuel Tank-1 Filler Cap
but Not Coded on The Automated File?		36. Location of Fuel Tank-2 Filler Cap
(0) No		(O) No fuel tank
(0) NO (1) Yes		(1) On back plane
(1) Yes		(2) Aft of center of the rear wheels (rear axle)
		on left side plane (3) Aft of center of the rear wheels (rear axle)
31. Researcher's Assessment of Vehicle	/	(3) Aft of center of the rear wheels (rear axle) on right side plane
Disposition	-	the second secon
(0) Not towed due to vehicle damage		(4) Forward of center of the rear wheels (rear axie) on left side plane
(1) Towed due to vehicle damage		(5) Forward of center of the rear wheels (rear
(9) Unknown		axle) on right side plane
(6)		(6) Over the center of the rear wheels (rear
	^	axle) on left side plane
32. Is This A Multi-Stage Manufactured Vehicle	O	(7) Over the center of the rear wheels (rear
And/Or A Certified Altered Vehicle?		axle) on right side plane
(0) No post manufacturer modifications		(8) Other (specify):
(1) Yes - post manufacturer modifications		(9) Unknown
(specify):		37. Type of Fuel Tank-1
		1 . · ·
		38. Type of Fuel Tank-2
(Include photograph of CERTIFICATION		(0) No fuel tank (electrical vehicle)
PLACARD in case report)		(1) Metallic (2) Non-metallic
(9) Unknown if vehicle is modified		(2) Non-metallic (9) Unknown
		1
FIRE OCCURRENCE		39. Location of Fuel Tank-1
THE SOCOTHEROE		40. Location of Fuel Tank-2
33. Fire Occurrence	0	(0) No fuel tank
(0) No fire		(1) Aft of center of the rear wheels (rear axle)
(6) 110 1110		centered
Yes, fire occurred		(2) Aft of center of the rear wheels (rear axle)
(1) Minor		left side (3) Aft of center of the rear wheels (rear axle)
(2) Major		right side
(9) Unknown		(4) Forward of center of the rear wheels (rear
		axle) centered
	\wedge	(5) Forward of center of the rear wheels (rear
34. Origin of Fire	<u>U</u>	axle) left side
(0) No fire		(6) Forward of center of the rear wheels (rear
(1) Vehicle exterior (front, side, back, top)		axle) right side
(2) Exhaust system		(7) Over center of the rear wheels (rear axle)
(3) Fuel tank (and other fuel retention		(8) Other (specify):
system parts)		13) CHARDWII
(4) Engine compartment		41. Damage to Fuel Tank-1
(5) Cargo/trunk compartment		1
(6) Instrument panel (7) Passenger compartment area		42. Damage to Fuel Tank-2 (0) No fuel tank
(8) Other location (specify):		(0) No fuel tank (1) No damage to fuel tank
(o) Other location (specify).		(2) Deformed, no seam failure
(9) Unknown		(3) Deformed, with a seam failure
(S) SIRIOWII		(4) Punctured
		(5) Lacerated (ripped)
		(6) Abraded (scraped)
		(7) Filler neck separation from the fuel tank
		(8) Other damage (specify):
		(9) Unknown
·	•	
1		1

43.	Leakage Location of Fuel System-1	47. Is This Vehicle Equipped With More Than Two Fuel Tanks?
4.4	Leakage Location of Fuel System-2	(0) No (one or two tanks only)
44.	(0) No fuel tank	
	(1) No fuel leakage	Yes - More Than Two Tanks
	(1) No triel legisade	(1) Yes - no damage to any tank or filler
	Drimon, Aron Of Laskaga	cap and no fuel system leakage
	Primary Area Of Leakage	(2) Yes no damage to any tank or filler
	(2) Tank	cap but there is fuel system leakage
	(3) Filler neck	(specify leakage location):
	(4) Cap	(specify leakage location).
	(5) Lines/pump/filter	(O) V down-rate on additional tank or
	(6) Vent/emission recovery	(3) Yes - damage to an additional tank or
	(8) Other (specify):	filler cap and there is fuel system leakage
	(9) Unknown	(specify the following):
		Type of tank
		Tank location
45.	Fuel Type-1	Filler cap location
		Tank damage
46	Fuel Type-2	Location of leakage
- ∪.	100119902	Type of fuel
	Single Fuel Type	(9) Unknown if more than two tanks
		(2, 2,
	(00) No fuel tank	·
	(01) Gasoline	
	(O2) Diesel	COMMENTS
	(03) CNG (Compressed Natural Gas)	COMMITTEE
	(04) LPG (Liquid Petroleum Gas) also	
	known as Propane	
	(05) LNG (Liquid Natural Gas)	
	(06) Methanol (M100 or M85)	
	(07) Ethanol (E100 or E85)	
	(O8) Other (Hydrogen or others) (specify):	
	Electric Powered or Electric/Solar	
	Powered Vehicles	
	(10) Lead Acid Battery	
	(11) Nickel-Iron Battery	
	(12) Nickel-Cadmium Battery	
	(13) Sodium Metal Chloride Battery	
	(14) Sodium Sulfur Battery	
	(18) Other (Specify):	
	(98) Other Hybrid (specify):	
	Application of the same	
	(99) Unknown fuel type	
	*** STOP: IF THE CDS APPLICAB	LE VEHICLE WAS NOT TOWED ***
		10 = 0)
	(GV)	10-0/
	DO NOT COMPLETE THE	INTERIOR VEHICLE FORM.

INTERIOR VEHICLE FORM

NATIONAL ACCIDENT SAMPLING SYSTEM CRASHWORTHINESS DATA SYSTEM

	GLAZING
1. Primary Sampling Unit Number	Type of Window/Windshield Glazing
2. Case Number - Stratum <u>9517</u>	15. WS $\frac{1}{4}$ 16. LF $\frac{4}{4}$ 17. RF $\frac{4}{4}$ 18. LR $\frac{4}{4}$ 19. RR $\frac{4}{4}$
3. Vehicle Number	20. BL <u>4</u> 21. Roof <u>3</u> 22. Other <u></u>
INTEGRITY	(O) No glazing
4. Passenger Compartment Integrity (00) No integrity loss Yes, Integrity Was Lost Through (01) Windshield (02) Door (side) (03) Door/hatch (back door) (04) Roof	 AS-1 — Laminated AS-2 — Tempered AS-3 — Tempered-tinted (original) AS-2 — Tempered-with after market tint AS-3 — Tempered-tinted (with additional after market tint) AS-14 — Glass/Plastic Glazing removed prior to accident Other (specify):
(05) Roof glass (06) Side window	(9) Unknown
(07) Rear window (backlight) (08) Roof and roof glass (09) Windshield and door (side) (10) Windshield and roof (11) Side and rear window (side window and backlight) (12) Windshield and side window (13) Door and side window (98) Other combination of above (specify): (99) Unknown	Window Precrash Glazing Status 23. WS
Door, Tailgate or Hatch Opening	Glazing Damage from Impact Forces
5. LF / 6. RF / 7. LR / 8. RR / 9. TG/H O	31. WS <u>9</u> 32. LF <u>/</u> 33. RF <u>/</u> 34. LR <u>/</u> 35. RR <u>/</u>
(0) No door/gate/hatch (1) Door/gate/hatch remained closed and operational (2) Door/gate/hatch came open during collision (3) Door/gate/hatch jammed shut (8) Other (specify): (9) Unknown Damage/Failure Associated with Door, Tailgate or Hatch	36. BL / 37. Roof / 38. Other (1) (0) No glazing (1) No glazing damage from impact forces (2) Glazing in place and cracked from impact forces (3) Glazing in place and holed from impact forces (4) Glazing out-of-place (cracked or not) and not holed from impact forces (5) Glazing out-of-place and holed from impact forces (6) Glazing disintegrated from impact forces (7) Glazing removed prior to accident
Opening in Collision. If IV05-IV09 ≠ 2, Then code Ø	(9) Unknown if damaged Glazing Damage from Occupant Contact
10. LF <u>O</u> 11. RF <u>O</u> 12. LR <u>O</u> 13. RR <u>O</u> 14. TG/H <u>O</u>	39. WS 4 40. LF 41. RF 42. LR 43. RR
(0) No door/gate/hatch or door not opened Door, Tailgate or Hatch Came Open During Collision	44. BL / 45. Roof / 46. Other 6
(1) Door operational (no damage) (2) Latch/striker failure due to damage	(0) No glazing (1) No occupant contact to glazing
(3) Hinge failure due to damage	(2) Glazing contacted by occupant but no glazing damage
(4) Door structure failure due to damage (5) Door support (i.e., pillar, sill, roof side rail,	(3) Glazing in place and cracked by occupant contact
etc.) failure due to damage	(4) Glazing in place and holed by occupant contact (5) Glazing out-of-place (cracked or not) by occupant
(6) Latch/striker and hinge failure due to damage	contact and not holed by occupant contact
(8) Other failure (specify):	(6) Glazing out-of-place by occupant contact and holed by occupant contact
(9) Unknown	(7) Glazing removed prior to accident (8) Glazing disintegrated by occupant contact (9) Unknown if contacted by occupant

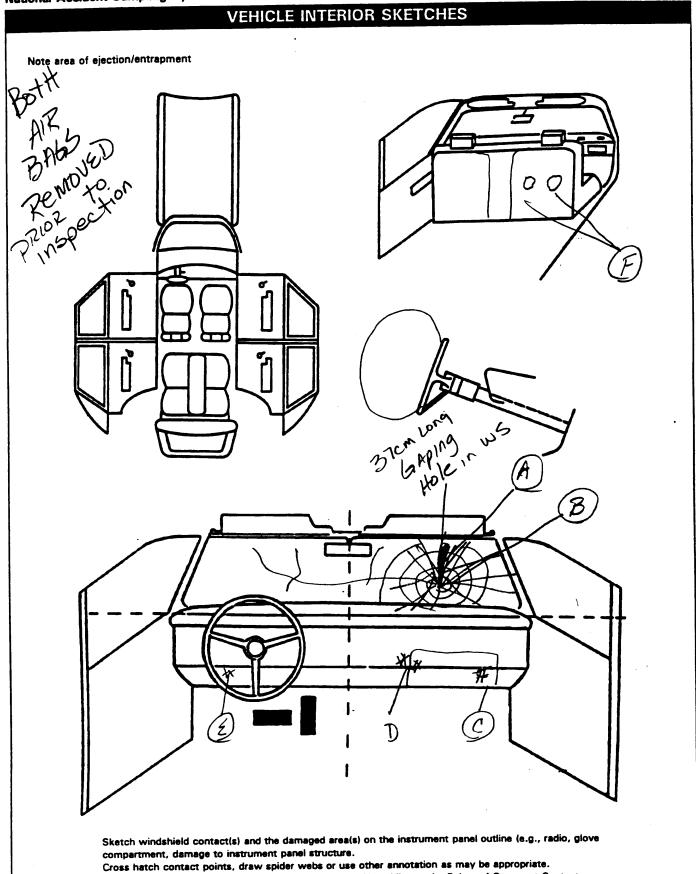


			occu	PANT AF	REA INTRUSION
Note	If no intrusion	s, leave varia	ibles IV47-IV	/86 blank.	INTRUDING COMPONENT
	Location of	Intruding	Magnitude of Intrusion	Dominant Crush Direction	Interior Components (01) Steering assembly (02) Instrument panel left (03) Instrument panel center
1st	47	48	49	50	(O4) Instrument panel right (O5) Toe pan (O6) A (A1/A2)-pillar (O7) B-pillar
2nd	51	52	53	54	(08) C-pillar (09) D-pillar (10) Side panel - forward of the A1/A2-pillar (11) Door panel (side)
3rd	55	56	57	58	(12) Side panel - rear of the B-pillar (13) Roof (or convertible top) (14) Roof side rail (15) Windshield
4th	59	60	61	62	(16) Windshield header (17) Window frame (18) Floor pan (includes sill) (19) Backlight header
5th	63	64	65	66	(20) Front seat back (21) Second seat back (22) Third seat back (23) Fourth seat back
	67				(24) Fifth seat back (25) Seat cushion (26) Back door/panel (e.g., tailgate) (27) Other interior component (specify):
	71				Exterior Components (30) Hood
8th	75	76	77	78	(31) Outside surface of this vehicle (specify): (32) Other exterior object in the environment
9th	79	. 80	81	82	(specify): (33) Unknown exterior object (97) Catastrophic (98) Intrusion of unlisted component(s)
10th	83	84	85	86	(specify): (99) Unknown
	TION OF INTF		h Seat		MAGNITUDE OF INTRUSION (1) ≥ 3 centimeters but < 8 centimeters (2) ≥ 8 centimeters but < 15 centimeters
	(11) Left (12) Middle (13) Right	(41 (42) Left) Middle) Right		 (2) ≥ 8 centimeters but < 15 centimeters (3) ≥ 15 centimeters but < 30 centimeters (4) ≥ 30 centimeters but < 46 centimeters (5) ≥ 46 centimeters but < 61 centimeters (6) ≥ 61 centimeters
	cond Seat (21) Left (22) Middle (23) Right	(98) Catastrop) Other enc area (spec	losed cify)	(7) Catastrophic (9) Unknown
Th	ird Seat (31) Left (32) Middle (33) Right	(99) Unknown		DOMINANT CRUSH DIRECTION (1) Vertical (2) Longitudinal (3) Lateral (7) Catastrophic (9) Unknown

-

.

Steering Column Type 1 Fixed column 2 Till column 2 Till column 2 Till column 3 Telescoping column 4 Till and telescoping column 6 Other column type (specify): 9 Unknown 4 Till and telescoping column 6 Other column type (specify): 9 Unknown 4 Other column type (specify): 6 Other column 6 Othe	STEERING COLUMN	INSTRUMENT PANEL
Steering Column 12 Tit column 13 Telescoping column 14 Tit and telescoping column 14 Tit and telescoping column 16 Other column type (specify): 16 Other column type (speci	2	92. Odometer Reading <u>6 2 3,000</u>
88. Tilt Steering Column Adjustment (1) No tilt steering column (1) Full up (2) Between full up and center (3) Unknown (3) Unknown (4) Between center and full down (5) Full down (6) Unknown (7) Unknown (8) Unknown (9) Unknown (9) Unknown (9) Unknown (9) Unknown (9) Unknown (9) Unknown (9) Unknown (9) Unknown (9) Unknown (9) Unknown (9) Unknown (9) Steering Rim/Spoke Deformation Code actual measured value in centimeters (10) No steering rim deformation cention to the nearest continenter (10) No steering rim deformation (10) Unknown (10) Unknown (11) Full down (12) Section S (13) Education of Steering Rim/Spoke Deformation (10) No steering rim deformation (10) No steering rim deformation (10) No steering rim deformation (10) No steering rim deformation (10) Section A (10) Section B (10) Section B (10) Section D Half Sections (10) Section D Half Sections (10) Unknown (11) Full up (12) Section B (13) Unknown (14) Section S (15) Unknown (15) Full down (16) No deformation (17) Left half of rim/spoke (18) Unknown (19) Unk	(1) Fixed column (2) Tilt column (3) Telescoping column (4) Tilt and telescoping column (8) Other column type (specify):	kilometers Code to the nearest 1,000 kilometers (000) No odometer (001) Less than 1,500 kilometers (500) 499,500 kilometers or more
89. Telescoping Steering Column Adjustment (0) No telescoping steering column (1) Full back (2) Between full back and midpoint (3) Midpoint (4) Between midpoint and full forward (5) Full forward (9) Unknown 90. Steering Rim/Spoke Deformation Code actual measured deformation to the nearest centimeter (00) No steering rim deformation (01-14) Actual measured value in centimeters (15) 15 centimeters or more (98) Observed deformation cannot be measured (99) Unknown 91. Location of Steering Rim/Spoke (99) Unknown 92. Location of Steering Rim/Spoke (99) Unknown 93. Location of Steering Rim/Spoke (99) Unknown 94. Location of Steering Rim/Spoke (99) Unknown 95. Knee Bolsters Deformed from Occupant Contact? (1) No deformation (2) Yes - deformation (2) Yes - door open (1) No glove compartment door (1) No - door did not open (2) Yes - door opend (3) Unknown 96. Did Glove Compartment door (1) No - door did not open (2) Yes - door opend (3) Unknown 97. Adaptive (Assistive) Driving Equipment (0) No adaptive driving equipment installed (Check all that apply.) (1) Hand controls for praking/acceleration (1) Section B (02) Section B (03) Section B (04) Section D Helf Sections (05) Upper half of rim/spoke (06) Lower half of rim/spoke (07) Left half of rim/spoke (07) Left half of rim/spoke (08) Right half of rim/spoke (09) Complete steering wheel collapse (10) Undetermined location (10) Undetermined location (10) Unknown 1 Additional or relocated switches (specify): 1 Additional or relocated switches (specify): 1 Raised roof (1) Wall-mounted head rest (used behind wheelchair) (1) Unknown	(0) No tilt steering column (1) Full up (2) Between full up and center (3) Center (4) Between center and full down (5) Full down	Source: Dometer 93. Instrument Panel Damage from Occupant Contact? (0) No (1) Yes (9) Unknown 94. Type of Knee Bolster Covering (0) No knee bolster
90. Steering Rim/Spoke Deformation Code actual measured deformation to the nearest centimeter (00) No steering rim deformation (01-14) Actual measured value in centimeters (15) 15 centimeters or more (98) Observed deformation cannot be measured (99) Unknown 91. Location of Steering Rim/Spoke Deformation (00) No steering rim deformation (00) No steering rim deformation Quarter Sections (01) Section A (02) Section B (03) Section C (04) Section D Half Sections (05) Upper half of rim/spoke (06) Lower half of rim/spoke (07) Left half of rim/spoke (08) Right half of rim/spoke (09) Complete steering wheel collapse (10) Undetermined location (99) Unknown 96. Did Glove Compartment Door Open During Collision(s)? (0) No glove compartment door (1) No - door did not open (2) Yes - door opened (9) Unknown 97. Adaptive (Assistive) Driving Equipment (1) No adaptive driving equipment (1) Adaptive driving equipment (1) Adaptive driving equipment (1) Steering controls for braking/acceleration [95] Steering control devices (attached to OEM steering wheel [1] Steering knob attached to steering wheel [1] Loweffort power steering (unit or device) [1] Replacement steering wheel (i.e., reduced diameter) [1] Joy-stick steering controls [1] Wheelchair tie-downs [1] Modification to seat belts (specify): [1] Additional or relocated switches (specify): [1] Raised roof [2] Wall-mounted head rest (used behind wheelchair) [3] Other adaptive device (specify):	(0) No telescoping steering column (1) Full back (2) Between full back and midpoint (3) Midpoint (4) Between midpoint and full forward (5) Full forward	(2) Rigid plastic (8) Other (specify): (9) Unknown 95. Knee Bolsters Deformed from Occupant Contact? (0) No knee bolster (1) No deformation (2) Yes - deformation
91. Location of Steering Rim/Spoke Deformation (OO) No steering rim deformation Quarter Sections (O1) Section A (O2) Section B (O3) Section C (O4) Section D Half Sections (O5) Upper half of rim/spoke (O6) Lower half of rim/spoke (O7) Left half of rim/spoke (O8) Right half of rim/spoke (O9) Complete steering wheel collapse (O9) Undetermined location (O) No adaptive driving equipment (O) No adaptive driving equipment (O) No adaptive driving equipment (O) No adaptive driving equipment (O) No adaptive driving equipment (O) No adaptive driving equipment (O) No adaptive driving equipment (O) No adaptive driving equipment (O) No adaptive driving equipment (O) No adaptive driving equipment (O) No adaptive driving equipment (O) No adaptive driving equipment (O) No adaptive driving equipment (O) No adaptive driving equipment (O) No adaptive driving equipment (O) No adaptive driving equipment (O) No adaptive driving equipment (I) Adaptive driving equipment	Code actual measured deformation to the nearest centimeter (00) No steering rim deformation (01-14) Actual measured value in centimeters (15) 15 centimeters or more (98) Observed deformation cannot be measured	96. Did Glove Compartment Door Open During Collision(s)? (0) No glove compartment door (1) No - door did not open (2) Yes - door opened (9) Unknown
(9) Unknown	91. Location of Steering Rim/Spoke Deformation (00) No steering rim deformation Quarter Sections (01) Section A (02) Section B (03) Section C (04) Section D Half Sections (05) Upper half of rim/spoke (06) Lower half of rim/spoke (07) Left half of rim/spoke (08) Right half of rim/spoke (09) Complete steering wheel collapse (10) Undetermined location	(0) No adaptive driving equipment (1) Adaptive driving equipment installed (Check all that apply.) [] Hand controls for braking/acceleration [] Steering control devices (attached to OEM steering wheel [] Steering knob attached to steering wheel [] Low effort power steering (unit or device) [] Replacement steering wheel (i.e., reduced diameter) [] Joy-stick steering controls [] Wheelchair tie-downs [] Modification to seat belts (specify): [] Additional or relocated switches (specify): [] Raised roof [] Wall-mounted head rest (used behind wheelchair)



Annotate the contacted area with a letter (begin with A) and list on the Points of Occupant Contact page.

		POIN	ITS OF OCC	UPANT CONTACT		
Contact	Interior Component Contacted	Occupant No. If Known	Body Region If Known	Supporting Physical E	vidence	Confidence Level of Contact Point
Α	001	02	HEAD	Stider Web		1
В	001		7	ASS AIR WAG COMPT	COVER	NA
С	013	02	Knee	Knee scut	CF.	3
D	013	02	Knee	Kne Black T	eanster.	3
E	014	01	Knee	Scuff/Abrasi		
F	151	03	Knees	Scuff 5		1
G	, 0, 1					
Н						
1						
J						
K						
L						
M						
N						
of codes (007) Steering column, tr selector is attachmer (008) Cellular tr radio (009) Add on er deck, sir (010) Left instrumer (013) Glove cor (014) Knee bols (015) Windshie more of theader, A instrumer steering a side only (016) Windshie more of the column (017) Windshie more of the column (018) Windshie more of the column (019) Windshie more of the column (019) Windshie more of the column (019) Windshie more of the column (019) Windshie more of the column (019) Windshie more of the column (019) Windshie more of the column (019) Windshie exterior of (017) Windshie exterior of (017)	quipment(e.g., tape conditioner) ument panel and strument panel and rument panel and mpartment door ster id including one or the following: front (A1/A2)-pillar, to panel, mirror, or the following: front (A1/A2)-pillar, to (A1/A2)-pillar, to (A1/A2)-pillar, to (A1/A2)-pillar, to panel, or mirror ar side only)	armrei (053) Left A (054) Left B (055) Other (056) Left si (057) Left si (058) Left si (059) Left si include follow sill, A or roo (060) Other (speci RIGHT SIDE (101) Right exclus armre (102) Right armre (103) Right (104) Right (105) Other (106) Right (107) Right (107) Right (108) Right (109) Right includ follow sill, A or roc	(A1/A2)-pillar -pillar left pillar (specify): ide window glass ide window sill ide window sill ide window glass ing one or more of the ing: frame, window (A1/A2)-pillar, B-pillar, f side rail. left side object ify): side interior surface, ding hardware or st a (A1/A2)-pillar B-pillar right pillar (specify): side window glass side window glass side window sill side window sill side window glass ling one or more of the ving: frame, window (A1/A2)-pillar, B-pillar f side rail. right side object	AIR BAG (170) Air bag-driver side (175) Air bag compartment cover-driver side (180) Air bag-passenger side (185) Air bag-passenger side (185) Air bag compartment cover-passenger side (190) Other air bag (specify) (195) Other air bag compartment cover (specify) ROOF (201) Front header (202) Rear header (203) Roof left side rail (204) Roof right side rail (205) Roof or convertible top FLOOR (251) Floor (including toe pan) (252) Floor or console mounted	ADAPTIVE (ASSISTI EQUIPMENT (401) Hand controls braking/accele (402) Steering control (attached to C wheel) (403) Steering knob steering whee (405) Replacement (i.e., reduced (406) Joy stick stee (407) Wheelchair ti (408) Modification to (specify): (409) Additional or awitches, (sp. (410) Raised roof (41-1) Wall mounted (used behind (412) Other adaptive (specify):	for station rol devices DEM steering wheel diameter) ring controls e-downs to seat belts, relocated ecify):
				transmission lever, including console (253) Parking brake handle (254) Foot controls including parking brake	CONFIDENCE LEVE POINT (1) Certain (2) Probable (3) Possible (9) Unknown	L OF CONTACT

		M	ANUAL REST	RAINTS					
NOTES	S: Encode the applicable data for each seat position in the vehicle. The attribute for the variable may be found belonger than the property of the property of the variable may be found belong the vehicle inspection than coded on the Occupant Assessment For								
	If a Child safety seat is present						•		
	If the vehicle has automatic res				a on t	he back	of the previous page.		
	THE TERMINATE FIRST CONTRACTOR		Left	Cente			Right		
	Availability	<u> </u>	4	0			4		
F	Evidence of usage	04					04		
ı	Used in this crash?		04				00		
R	Proper Use		1				0		
S T	Failure Modes						0		
•	Anchorage Adjustment		41				Ž		
	Availability		<u> </u>	7			4		
		 	74	7/2)		64		
∞шСОZ О	Evidence of usage Used in this crash?	-							
בַֿ	Proper Use	 							
O _N	Failure Modes								
Ď							7		
	Anchorage Adjustment	 							
	Availability	 		,					
Q	Evidence of usage	ļ							
T H	Used in this crash?						·		
Ε	Proper Use								
R	Failure Modes								
	Anchorage Adjustment	l		<u> </u>					
	(Active) Belt System Availability	•	se of Manual (Active) E				er Anchorage Adjustment		
, - ,	None available Belt removed/destroyed	(O) (1)	None used or not ava Belt used properly	niable	(0) (1)		ulder belt er anchorage adjustment for		
	Shoulder belt	(2)	Belt used properly wi	th child safety		shoulde			
	ap belt		seat			A altimos	abla abasildas Ooki Unaas		
	Lap and shoulder belt Belt available - type unknown	Belt	Used Improperly		Adjustable shoulder Belt Upper Anchorage				
(5)	Sait available - type alliniovill	(3) Shoulder belt worn under arm			(2) In full up position				
-	ral Belt Partially Destroyed	(4) Shoulder belt worn behind back or seat		ehind back or	(3) (4)		position lown position		
	Shoulder belt (lap belt destroved/removed)	(5)	Belt worn around mo	re than one	(5)		n unknown		
(7)	ap belt (shoulder belt		person		·-·		wn if position has adjustable		
	destroyed/removed) Other belt (specify):	(6) (7)	Lap belt worn on about Lap belt or lap and si			upper a	anchorage adjustment		
(0)	Julian Delit (speciny).	(//	used improperly with						
(9)	Unknown	401	seat (specify):	of manual bale					
Manual	(Active) Belt System Use	(8)	Other improper use of system (specify):	n manual belt					
(00)	None used, not available, or belt								
(01)	removed/destroyed Inoperable (specify):	(9)	Unknown				•		
(02)	Shoulder belt	Menual (Active) Belt Failure Mo	des During					
(03)	Lap belt	Accident	No manual belt used	or not available					
(04) (05)	Lap and shoulder belt Belt used - type unknown	(0) (1)	No manual belt failur						
(08)	Other belt used (specify):	(2)	Torn webbing (stretch not included)						
(12)	Shoulder belt used with child safety	(3)	Broken buckle or late	hplate					
,40:	seat	(4)	Other anchorage ser						
(13) (14)	Lap belt used with child safety seat Lap and shoulder belt used with	(5)	Other anchorage sep (specify):	-e: 615U					
, , ,,,	hild safety seat (6) Broken retractor								
	child safety seat Belt used with child safety seat	(6) (7)	Broken retractor Combination of above						

(8) Other manual belt failure (specify):

Unknown

(9)

type unknown

(18) Other belt used with child safety

Vauona	Accident Sampling Cystom St			
		AUTOMATIC RESTRAI	NTS	
NOTE	S: Encode the data for each ap below. Restraint systems sl Assessment Form.	plicable front seat position. The nould be assessed during the vo AIR BAGS	e attribute for the variables mehicle inspection then coded o	ay be found n the Occupant
		Left Front	Right Front	Other
F	Availability/Function	7	1	
l R	Deployment	1	1	
S	Failure		2	
(O) (1)	System Availability/Function Not equipped/not available Air bag	Frontal Air Bag System Deployment (This Occupant Position) (0) Not equipped/not available (1) Deployed during accident (as of impact)	Air Bag(s) Deployment, O Seat Frontal (This Occupa (0) Not equipped with a result (1) Deployed during ac of impact)	nt Position) an <i>"other"</i> air bag
(2) (3) (9) Are This System (0) (1)	Air bag disconnected (specify): Air bag not reinstalled Unknown ere Indications of Air Bag a Failure? (This Occupant Position) Not equipped/not available	 (2) Deployed inadvertently just practident (3) Deployed, accident sequence undetermined (4) Deployed as a result of a non event during accident sequen (e.g., fire, explosion, electrical Unknown if deployed (7) Nondeployed (9) Unknown 	to accident (3) Deployed, details a (4) Deployed as a resu collision noncollision event ce sequence (e.g., fire	inknown ilt of a during accident e, explosion,
(9)	Unknown	AUTOMATIC BELTS	3	
		Left	Right	
	Availability/Function	0	\Diamond	
F	Use	0	8	
R	Туре	0	0	
S	Proper Use	O	0	
•	Failure Modes	\mathcal{O}	0	
Availat (0) (1) (2) (3) <i>Non</i> (4) (9)	atic (Passive) Belt System pility/Function Not equipped/not available 2 point automatic belts 3 point automatic belts Automatic belts - type unknown -functional Automatic belts destroyed or rendered inoperative Unknown actic (Passive) Belt System Use	Proper Use of Automatic (Passive) E System (0) Not equipped/not available/not (1) Automatic belt used properly (2) Automatic belt used properly child safety seat Automatic Belt Used Improperly (3) Automatic shoulder belt work arm (4) Automatic shoulder belt work back (5) Automatic belt work around	During Accident (0) Not equipped/not (1) No automatic belt (2) Torn webbing (str included) (3) Broken buckle or I (4) Upper anchorage s (5) Other anchorage s (6) Broken retractor (7) Combination of all	available/not in use failure(s) etched webbing not atchplate separated separated (specify):
(1) (2) (3) (9) Autom (0) (1) (2)	Not equipped/not available/destroyed or rendered inoperative Automatic belt in use Automatic belt not in use (manually disconnected, motorized track inoperative) Automatic belt use unknown Unknown actic (Passive) Belt System Type Not equipped/not available Non-motorized system Motorized system Unknown	than one person (6) Lap portion of automatic beh on abdomen (7) Automatic lap and shoulder is automatic shoulder belt used improperly with child safety seat (specify): (8) Other improper use of automatic system (specify): (9) Unknown	bett or i fy):	

FIRST SEAT FRONTAL AIR BAGS

NOTES: Encode the applicable data for the driver and first seat passenger in the vehicle. The attribute for the variable may be found below. Restraint systems should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

	Driver	Passenger
Type of air bag?		. /
Flaps open at tear points?	<u> </u>	X
Flaps damaged?		
Air bag damaged?	01	04,07
Source of air bag damage	01	, 88
Air bag tethered?	/	
Air bag have vent ports?	2	A
Other occupant contact air bag?	1	
Occupant wearing eyewear?	9	9

Type of Air Bag

- (O) Not equipped/not available
- (1) Original manufacturer installed system
- (2) Retrofitted air bag
- (3) Replacement air bag
- (8) Unknown type of air bag
- (9) Unknown

Did Air Bag Module Cover Flap(s) Open At Designated Tear Points?

- (0) Not equipped/not available
- (1) No
- (2) Yes
- (3) Deployed, unknown if flap(s) opened at designated tear points
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

Were Air Bag Module Cover Flap(s) Damaged?

- (0) Not equipped/not available
- (1) No
- (2) Yes (specify):
- (3) Deployed, unknown if air bag module cover flap(s) damaged
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

Was There Damage To The Air Bag?

- (00) Not equipped/not available
- (01) Not damaged

Yes - Air Bag Damage

- (02) Ruptured
- (03) Cut
- (04) Torm
- (05) Holed
- (06) Burned
- (07) Abraded
- (88) Other damage (specify):
- (95) Damaged, details unknown
- (96) Deployed, unknown if damaged
- (97) Not deployed
- (98) Unknown if deployed
- (99) Unknown

Source of Air Bag Damage

- (00) Not equipped/not available
- (01) Not damaged
- (02) Object worn by occupant, (specify):
- (03) Object carried by occupant, (specify):
- (04) Adaptive/assistive controls, (specify):
- (05) Fire in vehicle
- (06) Thermal burns
- (07) Rescue or emergency efforts
- (88) Other damage source (specify): BRACKET SCREWS
- (95) Damaged, unknown source
- (96) Deployed, unknown if damaged
- (97) Not deployed
- (98) Unknown if deployed
- (99) Unknown

Was The Air Bag Tethered?

- (0) Not equipped/not available
- (1) No
- (2) Yes (specify number of tether straps):
- (3) Deployed, unknown if tethered
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

Did The Air Bag Have Vent Ports?

- (0) Not equipped/not available
- (1) No
- (2) Yes (specify number of vent ports):
- (3) Deployed, unknown if vent ports present
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

Was the Air Bag in this Occupant's Position Contacted by Another Occupant?

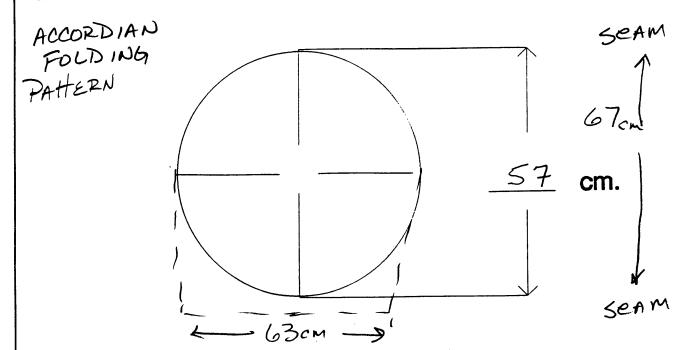
- (0) Not equipped/not available
- (1) No
- (2) Yes (specify):
- (3) Deployed, unknown if other occupant contact to air bag
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

Was This Occupent Wearing Eye-wear?

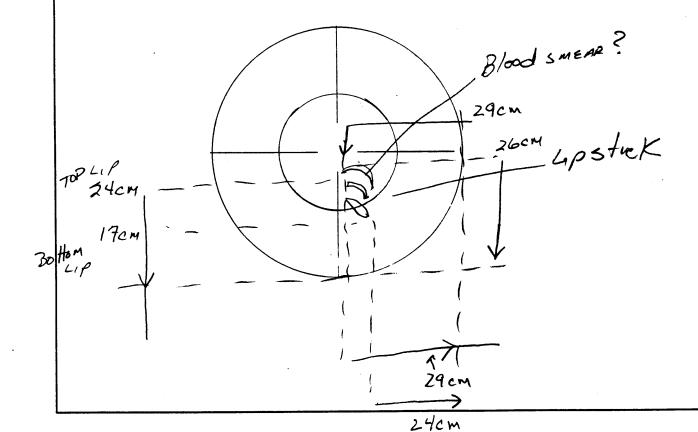
- (0) Not equipped/not available
- (1) No
- (2) Eyegiasses/sungiasses
- (3) Contact lenses
- (4) Deployed, unknown if eyewear worn
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

DRIVER AIR BAG DAMAGE AND CONTACT SKETCHES

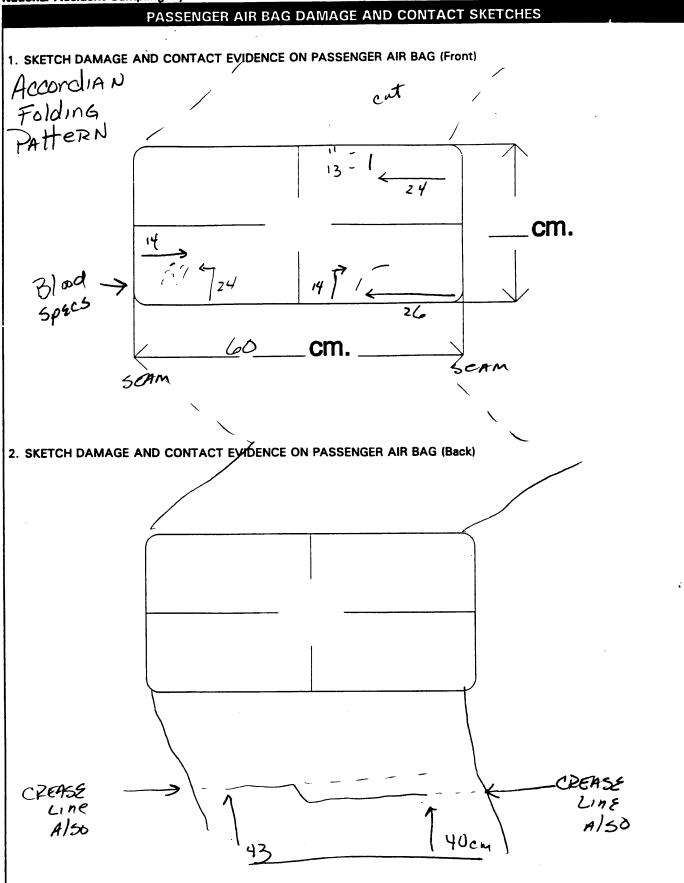
1. SKETCH DAMAGE AND CONTACT EVIDENCE ON DRIVER AIR BAG (Front)



2. SKETCH DAMAGE AND CONTACT EVIDENCE ON DRIVER AIR BAG (Back)



DRIVER AIR BAG S	KETCHES (Cont'd)
3. DRIVER AIR BAG MODULE COVER FLAP SIZE. (DOUBLE) a. Upper Flap width (Wu) 13/2 cm width (WL) height (Hu) W, H, H, H,	
4. SKETCH OF OTHER TYPE OF AIR BAG MODULE FLAP AND SIZE	5. SKETCH OF OTHER TYPE OF AIR BAG VENT PORTS
6. SKETCH LOCATION OF CIRCULAR AIR BAG VENT PORTS	Exhaus + Hole DIAM. 3cm



PASSENGER AIR BA	G SKETCHES (Cont'd)
3. PASSENGER AIR BAG MODULE COVER FLAP SIZE (SINGLE) a. Flap width (W) 35 height (H) 14	4. PASSENGER AIR BAG MODULE COVER FLAP SIZE (DOUBLE) a. Upper Flap width (Wu) height (Hu) H, H, H, W, W, W, H, H, H, H,
5. SKETCH OF OTHER TYPE OF AIR BAG MODULE FLAP AND SIZE	6. SKETCH OF OTHER TYPE OF AIR BAG VENT PORTS
7. SKETCH LOCATION OF RECTANGULAR AIR BAG VENT PORTS 10 11 12 1 2 9	Hole Diam Gem

"OTHER" AIR BAG DAMAGE AND CONTACT SKETCHES	
1. SKETCH DAMAGE AND CONTACT EVIDENCE ON "OTHER" AIR BAG (Front)	
	1
A SUMMER OF THE SECOND OF THE SECOND	
2. SKETCH DAMAGE AND CONTACT EVIDENCE ON "OTHER" AIR BAG (Back)	

3. SKETCH AIR BAG M	ODULE FLAP AND SIZE OR (PENING FOR AIRBAG	
4. SKETCH AIR BAG VI	ENT PORTS		
4. SKETCH AIR BAG VI			
4. SKETCH AIR BAG VI	<u></u>		
4. SKETCH AIR BAG VI	<u></u>		
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4. SKETCH AIR BAG VI			
4. SKETCH AIR BAG VI			

HEAD RESTRAINTS/SEAT EVALUATION

NOTES: Encode the applicable data for each seat position in the vehicle. The attribute for these variables may be found at the bottom of the page. Head restraint type/damage and seat type/performance should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

		Left	Center	Right
	Head Restraint Type/Damage	3	Control	3
	Seat Type	02		02
F	Seat Performance			/
R S	Seat Orientation	1		7
Ť	Seat Track Position	6		5
	Seat Back Incline Pre/Post Impact	2.3		23
	Head Restraint Type/Damage	3		3
	Seat Type	03	٥3	03
S	Seat Performance		1	
CO	Seat Orientation	1	1	/
N D	Seat Track Position	1	1	1
	Seat Back Incline Pre/Post Impact	01	01	01
	Head Restraint Type/Damage			
т	Seat Type			
H	Seat Performance			
R D	Seat Orientation			
U	Seat Track Position			·
	Seat Back Incline Pre/Post Impact			
	Head Restraint Type/Damage			<u> </u>
0	Seat Type			
Ĥ	Seat Performance			
E R	Seat Orientation			
	Seat Track Position			
	Seat Back Incline Pre/Post Impact			

DESCRIBE ANY INDICATION OF ABNORMAL OCCUPANT POSTURE (I.E., UNUSUAL OCCUPANT CONTACT PATTERN)

HEAD RESTRAINTS/SEAT EVALUATION

Head Restraint Type/Damage by Occupant at This Occupant Position

- (0) No head restraints
- (1) Integral no damage(2) Integral damaged during accident
- (3) Adjustable no damage(4) Adjustable damaged during accident
- (5) Add-on no damage(6) Add-on damaged during accident
- (8) Other Specify):
- (9) Unknown

Seat Type (this Occupant Position)

- (00) Occupant not seated or no SART
- (01)Bucket
- Bucket with folding back (02)
- (03) Bench
- (04) Bench with separate back cushions
- (05) Bench with folding back(s)
- (06) Split bench with separate back cushions
- (07) Split bench with folding back(s)
- (08) Pedestal (i.e., column supported)
- (09) Other seat type (specify):
- (10) Box mounted seat (i.e., van type)
- (99) Unknown

Seat Performance (this Occupant Position)

- (0) Occupant not seated or no seat
- No seat performance failure(s)
- Seat adjusters failed
- (3) Seat back folding locks or "seat back" failed (specify):
- (4) Seat tracks/anchors failed
- (5) Deformed by impact of occupant
- (6) Deformed by passenger compartment intrusion (specify):
- (7) Combination of above (specify):
- (8) Other (specify):
- (9) Unknown

Seat Orientation (this Occupant Position)

- (0) Occupant not seated or no seat
- Forward facing seat
- Rear facing seat
- Side facing seat (inward) (3)
- Side facing seat (outward) (4)
- Other (specify):
- (9) Unknown

Seat Track Adjusted Position Prior To Impact

- (0) Occupant not seated or no seat
- (1) Non-adjustable seat track

Adjustable Seat Track

- (2) Seat at forward most track position
- (3) Seat between forward most and middle track positions
- Seat at middle track position
- (5) Seat between middle and rear most track positions
- (6) Seat at rear most track position
- (9) Unknown

Seat Back Incline Prior and Post impact

- (00) Occupant not seated or no seat
- (01) Not adjustable

Upright prior to impact

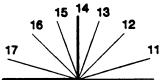
- (11) Moved to completely rearward position
- Moved to rearward midrange position
- (13)Moved to slightly rearward position
 - Retained pre-impact position
- Moved to slightly forward (15)position
- (16)Moved to forward midrange position
- (17)Moved to completely forward position

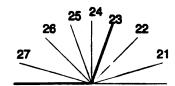
Slightly reclined prior to impact

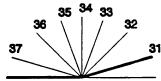
- Moved to completely rearward position
- Moved to rearward midrange (22)position
- Retained pre-impact postion
- Moved to upright position (24)
- (25)Moved to slightly forward position
- Moved to forward midrange (26)position
- (27)Moved to completely forward position

Completely reclined prior to impact

- Retained pre-impact position
- (32)Moved to rearward midrange position
- (33)Moved to slightly rearward position
- Moved to upright position
- (34) (35) Moved to slightly forward position
- (36)Moved to forward midrange position
- (37)Moved to completely forward position
- (99) Unknown







Coding diagrams for Seat Back Incline Position Prior and Post Impact

DESCRIBE ANY INDICATION OF ABNORMAL OCCUPANT POSTURE (I.E., UNUSUAL OCCUPANT CONTACT PATTERN)

JECTION No [/] Yes [Describe indications of ejection and		nvolved in partie	al ejection	(s):		
Occupant Number						
Ejection						
(Note on Vehicle Interior Sketch) Ejection Area						
Ejection Medium						
Medium Status						
ection (1) Complete ejection (2) Partial ejection (3) Ejection, Unknown degree (9) Unknown ection Area (1) Windshield	(7) Roof (8) Other area (e.g., back of pickup, etc.) (specify): (9) Unknown Ejection Medium		(5) Integral structure (8) Other medium (specify): (9) Unknown Medium Status (Immediately Pricto Impact) (1) Open			
(2) Left front(3) Right front(4) Left rear(5) Right rear(6) Rear	(1) Door/hatch/tailgate (2) Nonfixed roof structure (3) Fixed glazing (4) Nonfixed glazing (specify):			(2) Closed (3) Integral structure (9) Unknown		
NTRAPMENT No [X] Ye escribe entrapment mechanism:	s []					

	CHILD SAFETY	SEAT FIEL	LD ASSESSMENT		
Wh	When a child safety seat is present enter the occupant's number in the first row and complete the column below the occupant's number using the codes listed below. Complete a column for each child safety seat present.				
Oc	cupant Number				
	Type of Child				
2.	Safety Seat Child Safety Seat				
	Orientation				
3.	Child Safety Seat Harness Usage				
4.	Child Safety Seat Shield Usage				
5.	Child Safety Seat Tether Usage				
6.	Child Safety Seat Make/Model	Specify B	Below for Each Child Safety Seat		
1.	Type of Child Safety Seat (0) No child safety seat		. Child Safety Seat Shield Usage . Child Safety Seat Tether Usage		
	(1) Infant seat(2) Toddler seat(3) Convertible seat(4) Booster seat	Note: Options Below Are L (00) No child safety seat			
2.	(7) Other type child safety seat (specify): (8) Unknown child safety seat type (9) Unknown if child safety seat used Child Safety Seat Orientation (00) No child safety seat	-	Not Designed with Harness/Shield/Tether (O1) After market harness/shield/tether added, not used (O2) After market harness/shield/tether used (O3) Child safety seat used, but no after market harness/shield/tether added (O9) Unknown if harness/shield/tether		
	Designed for Rear Facing for This Age/Weight (01) Rear facing (02) Forward facing (08) Other orientation (specify):		added or used Designed With Harness/Shield/Tether (11) Harness/shield/tether not used (12) Harness/shield/tether used (19) Unknown if harness/shield/tether used		
	(09) Unknown orientation Designed for Forward Facing for This Age/Weight (11) Rear facing		Unknown If Designed With Harness/Shield/Tether (21) Harness/shield/tether not used (22) Harness/shield/tether used (29) Unknown if harness/shield/tether used		
	(12) Forward facing (18) Other orientation (specify):		(99) Unknown if child safety seat used		
	(19) Unknown orientation	6.	 Child Safety Seat Make/Model (Specify make/model and occupant number) 		
	Unknown Design or Orientation For This Age/Weight, or Unknown Age/Weight (21) Rear facing (22) Forward facing (28) Other orientation (specify):				
	(29) Unknown orientation				
2	(99) Unknown if child safety seat used Child Safety Seat Harness Usage				

Appendix E:

NASS CDS VEHICLE FORMS: VEHICLE #2

National Highway Traffic Safety Administration	GENERAL VE	HICLE FORM NATIONAL ACCIDENT SAMPLING SYSTE CRASHWORTHINESS DATA SYSTE
Primary Sampling Unit Number Case Number - Stratum Vehicle Number	9517	12. Speed Limit (000) No statutory limit Code posted or statutory speed limit in kmph (999) Unknown
VEHICLE IDENTIFIC 4. Vehicle Model Year Code the last two digits of the r (99) Unknown 5. Vehicle Make (specify): Applicable codes are found in your NASS Data Collection, Coding a	model year	3 D mph X 1.6093 = 48 kmph 13. Police Reported Alcohol Presence For Driver (0) No alcohol present (1) Yes alcohol present (7) Not reported (8) No driver present (9) Unknown
Editing Manual. (99) Unknown 6. Vehicle Model (specify): Applicable codes are found in your NASS Data Collection, Coding a Editing Manual. (999) Unknown	006	14. Alcohol Test Result For Driver Code actual value (decimal implied before first digit—0.xx) (95) Test refused (96) None given (97) AC test performed, results unknown (98) No driver present (99) Unknown Source: PAR
7. Body Type Note: Applicable codes may be the back of this page. 8. Vehicle Identification Number LEABPS 1393XEE 1 2 3 4 5 6 7 8 9 10 11		15. Police Reported Other Drug Presence For Driver (0) No other drug(s) present (1) Yes other drug(s) present (7) Not reported (8) No driver present (9) Unknown
Left justify; Slash zeros and lett No VIN—Code all zeros Unknown 9. Vehicle Special Use (This Trip) (0) No special use (1) Taxi (2) Vehicle used as school bus (3) Vehicle used as other bus (4) Military (5) Police	er Z (0 and -Z)	16. Other Drug Specimen Test Result For Driver (0) No specimen test given (1) Drug(s) not found in specimen (2) Drug(s) found in specimen, (specify): (3) Specimen test given, results unknown or not obtained (8) No driver present (9) Unknown if specimen test given
(6) Ambulance (7) Fire truck or car (8) Other (specify): (9) Unknown OFFICIAL RECOR	· · · · · · · · · · · · · · · · · · ·	17. Driver's Zip Code (00001)Driver not a resident of U.S. or territories Code actual 5-digit zip code (99998)No driver present (99999)Unknown
10. Police Reported Vehicle Disposit (0) Not towed due to vehicle da (1) Towed due to vehicle damas (9) Unknown 11. Police Reported Travel Speed Code to the nearest kmph (NOT less than 0.5 kmph) (160) 159.5 kmph and above (999) Unknownmph X 1.6093 =kr	mage ge ge E: 000 means	18. Driver's Race/Ethnic Origin (1) White (non-Hispanic) (2) Black (non-Hispanic) (3) White (Hispanic) (4) Black (Hispanic) (5) American Indian, Eskimo or Aleut (6) Asian or Pacific Islander (7) Other (specify): (8) No driver present (9) Unknown

CODES FOR BODY TYPE

CDS APPLICABLE VEHICLES

Automobiles

- (01) Convertible (excludes sun-roof, t-bar)
- (02) 2-door sedan, hardtop, coupe
- (03) 3-door/2-door hatchback
- (04) 4-door sedan, hardtop
- (05) 5-door/4-door hatchback
- (06) Station wagon (excluding van and truck based)
- (07) Hatchback, number of doors unknown
- (08) Other automobile type (specify):
- (09) Unknown automobile type

Automobile Derivatives

- (10) Auto based pickup (includes El Camino, Caballero, Ranchero, Brat, and Rabbit pickup)
- (11) Auto based panel (cargo station wagon, auto based ambulance/hearse)
- (12) Large limousine more than four side doors or stretched chassis
- (13) Three-wheel automobile or automobile derivative

Utility Vehicles (≤ 4,500 kgs GVWR)

- (14) Compact utility (Jeep CJ-2 CJ-7, Scrambler, Golden Eagle, Renegade, Laredo, Wrangler, Cherokee [84 and after], Dispatcher, Raider, Bronco II, Bronco [76 and before], Explorer, S-10 Blazer, Geo Tracker, Bravada, S-15 Jimmy, Thing, Pathfinder, Trooper, Trooper II, Rodeo, Amigo, Navajo, 4-Runner, Montero, Passport, Samurai, Sidekick, Rocky)
- (15) Large utility (includes Jeep Cherokee [83 and before], Ramcharger, Trailduster, Bronco-fullsize [78 and after], fullsize Blazer, fullsize Jimmy, Hummer, Landcruiser, Rover, Scout, Yukon)
- (16) Utility station wagon (Chevy Suburban, GMC Suburban, Travelall, Grand Wagoneer, includes suburban limousine)
- (19) Utility, unknown body type

Van Based Light Trucks (≤ 4,500 kgs GVWR)

- (20) Minivan (Town and Country, Caravan, Grand Caravan, Voyager, Grand Voyager, Mini-Ram, Vista, Aerostar, Windstar, Villager, Lumina APV, Trans Sport, Silhouette, Astro, Safari, Toyota Van, Toyota Minivan, Previa, Nissan Minivan, Quest, Mitsubishi Minivan, Expo Wagon, Vanagon/Camper.)
- (21) Large van (B150-B350, Sportsman, Royal, Maxiwagon, Ram, Tradesman, Voyager [83 and before], E150-E350, Econoline, Clubwagon, Chateau, G10-G30, Chevy Van, Beauville, Sport Van, G15-G35, Rally Van, Vandura.)
- (22) Step van or walk-in van (≤ 4,500 kgs GVWR)
- (23) Van based motorhome (≤ 4,500 kgs GVWR)
- (24) Van based school bus (≤ 4,500 kgs GVWR)
- (25) Van based other bus (≤ 4,500 kgs GVWR)
- (28) Other van type (Hi-Cube Van, Kary) (specify):
- (29) Unknown van type

Light Conventional Trucks (Pickup style cab, ≤ 4,500 kgs GVWR)

- (30) Compact pickup (D50, Colt P/U, Ram 50, Dakota, Arrow Pickup [foreign], Ranger, Courier, S-10, T-10, LUV, S-15, T-15, Sonoma, Datsun/Nissan Pickup, P'up, Mazda Pickup, Toyota Pickup, Mitsubishi Pickup)
- (31) Large Pickup (Jeep Pickup, Comanche, Ram Pickup, D100-D350, W100-W350, F100-F350, C10-C35, K10-K35, R10-R35, V10-V35, Silverado, Sierra, R100-R500, T100)

- (32) Pickup with slide-in camper
- (33) Convertible pickup
- (39) Unknown pickup style light conventional truck type

Other Light Trucks (≤ 4,500 kgs GVWR)

- (40) Cab chassis based (includes rescue vehicles, light stake, dump, and tow truck)
- (41) Truck based panel
- (42) Light truck based motorhome (chassis mounted)
- (45) Other light conventional truck type
- (48) Unknown light truck type
- (49) Unknown light vehicle type (automobile, utility, van, or light truck)

OTHER VEHICLES

Buses (Excludes Van Based)

- (50) School bus (designed to carry students, not cross country or transit)
- (58) Other bus type (e.g., transit, intercity, bus based motorhome) (specify):
- (59) Unknown bus type

Medium/Heavy Trucks (> 4,500 kgs GVWR)

- (60) Step van (> 4,500 kgs GVWR)
- (61) Single unit straight truck (4,500 kgs < GVWR ≤ 8,850 kgs)
- (62) Single unit straight truck (8,850 kgs < GVWR ≤ 12,000 kgs)</p>
- (63) Single unit straight truck (> 12,000 kgs GVWR)
- (64) Single unit straight truck, GVWR unknown
- (65) Medium/heavy truck based motorhome
- (67) Truck-tractor with no cargo trailer
- (68) Truck-tractor pulling one trailer
- (69) Truck-tractor pulling two or more trailers
- (70) Truck-tractor (unknown if pulling trailer)
- (78) Unknown medium/heavy truck type
- (79) Unknown truck type (light/medium/heavy)

Motored Cycles (Does Not Include All-Terrain Vehicles/Cycles)

- (80) Motorcycle
- (81) Moped (motorized bicycle)
- (82) Three-wheel motorcycle or moped
- (88) Other motored cycle (minibike, motorscooter) (specify):
- (89) Unknown motored cycle type

Other Vehicles

- (90) ATV (All-Terrain Vehicle) and ATC (All-Terrain Cycle)
- (91) Snowmobile
- (92) Farm equipment other than trucks
- (93) Construction equipment other than trucks
- (97) Other vehicle type
- (99) Unknown body type

	PRECRASH ENVIRONMENTAL DATA		,
	PRECRASH ENVIRONMENTAL DATA	25. Roadway Surface Condition	/
1.	Relation To Interchange Or Junction	(1) Dry	
19.		- (2) Wet	
1	(0) Non-interchange area and non-junction	(3) Snow or slush	
	(1) Interchange area related	(4) Ice	
		(5) Sand, dirt, or oil	
1	Non-Interchange junctions	(8) Other (specify):	
1	(2) Intersection related	(9) Unknown	
1	(3) Driveway, alley access related	(9) Olikilowii	
1	(4) Other junction (specify)		,
1	•	26. Light Conditions	'
l	(5) Unknown type of junction	(1) Daylight	
1		(2) Dark	
1	(9) Unknown	(3) Dark, but lighted	
1		(4) Dawn	
1		(5) Dusk	
20	Trafficway Flow	(9) Unknown	
-0.	(0) Not physically divided (two way traffic)	(5) Olikilowii	
ł	(1) Divided trafficway-median strip without		
1	positive barrier	27 Asmanharia Candisiana	`
l	(2) Divided trafficway-median strip with positive	27. Atmospheric Conditions	_
1	barrier	(0) No adverse atmospheric-related driving	
1		conditions	
1	(3) One way traffic	(1) Rain	
1	(9) Unknown	(2) Sleet/hail	
1		(3) Snow	
21	Number Of Travel Lanes	(4) Fog	
-"	(1) One	(5) Rain and fog	
	(2) Two	(6) Sleet and fog	
	(3) Three	(7) Other (e.g., smog, smoke, blowing sand or	
	(4) Four	dust, etc.) (specify):	
	(4) Four		
1	•••	(9) Unknown	
	(6) Six		
1	(7) Seven or more	28. Traffic Control Device	✓
j	(9) Unknown	(0) No traffic control(s)	
'	}	(1) Traffic control signal (not RR crossing)	
22.	Roadway Alignment		
	(1) Straight	Regulatory	
1	(2) Curve right	(2) Stop sign	
	(3) Curve left	(3) Yield sign	
	(9) Unknown	(4) School zone sign	
1	10, 0	(5) Other regulatory sign (specify):	
1	1	(o) orner reduition and responsible	
23.	Roadway Profile	(6) Warning sign (not RR crossing)	
1	(1) Level	(7) Unknown sign	
Į .	(2) Uphill grade (>2%)	(8) Miscellaneous/other controls including RR	
ĺ	(3) Hill crest		
1	(4) Downhill grade (>2%)	controls (specify):	
1	(5) Sag	(O) Hakaawa	
1	(9) Unknown	(9) Unknown	
		1	
	Roadway Surface Type	2 00 Tartilla Campal Davidsa Francis 1	2
24.	· ''		1
	(1) Concrete	(0) No traffic control device	
	(2) Bituminous (asphalt)	(1) Traffic control device not functioning	
1	(3) Brick or block	(specify):	_
1	(4) Slag, gravel, or stone	(2) Traffic control device functioning properly	
	(5) Dirt	(9) Unknown	
	(8) Other (specify):	1	
1	(9) Unknown	·	
1			

	PRECRASH DRIVER RELATED DATA	This Vehicle Traveling
20	Driver's Distraction/Inattention To Driving	(10) Over the lane line on left side of travel lane
5 U.	(Prior To Recognition Of Critical Event)	(11) Over the lane line on right side of travel lane (12) Off the edge of the road on the left side
	(00) No driver present	(13) Off the edge of the road on the right side
	(01) Attentive or not distracted	(14) End departure
	(02) Looked but did not see	(15) Turning left at intersection
	ļ	(16) Turning right at intersection
	Distractions	(17) Crossing over (passing through) intersection
	(03) By other occupant(s), (specify):	(18) This vehicle decelerating
		(19) Unknown travel direction
	(04) By moving object in vehicle (specify):	
	(05) While talking or listening to cellular phone	Other Motor Vehicle In Lane
	(specify location and type of phone):	(50) Other vehicle stopped
	(appearly location and type of priority).	(51) Traveling in same direction with lower steady
	(06) While dialing cellular phone (specify location	speed (52) Traveling in same direction while decelerating
	and type of phone):	(53) Traveling in same direction with higher speed
		(54) Traveling in opposite direction
	(07) While adjusting climate controls	(55) In crossover
	(08) While adjusting radio, cassette, CD (specify):	(56) Backing
	(OO) White size other device/object is unbidle	(59) Unknown travel direction of other motor
	(09) While using other device/object in vehicle	vehicle in lane
	(specify): (10) Sleepy or fell asleep	
	(11) Distracted by outside person, object, or event	Other Motor Vehicle Encroaching Into Lane
	(specify):	(60) From adjacent lane (same direction)—over left lane line
	(12) Eating or drinking	(61) From adjacent lane (same direction)—over right
	(13) Smoking related	lane line
	(97) Distracted/inattentive, details unknown	(62) From opposite direction—over left lane line
	(98) Other, distraction (specify):	(63) From opposite direction—over right lane line
		(64) From parking lane
	(99) Unknown	(65) From crossing street, turning into same
31.	Pre-Event Movement (Prior to	direction
	Recognition of Critical Event)	(66) From crossing street, across path
	(00) No driver present	(67) From crossing street, turning into opposite
	(01) Going straight	direction
	(02) Decelerating in traffic lane	(68) From crossing street, intended path not known (70) From driveway, turning into same direction
	(03) Accelerating in traffic lane (04) Starting in traffic lane	(71) From driveway, turning into same direction
	(05) Stopped in traffic lane	(72) From driveway, turning into opposite direction
	(06) Passing or overtaking another vehicle	(73) From driveway, intended path not known
	(07) Disabled or parked in travel lane	(74) From entrance to limited access highway
	(08) Leaving a parking position	(78) Encroachment by other vehicle—details
	(09) Entering a parking position	unknown
	(10) Turning right	
	(11) Turning left	Pedestrian, Pedalcyclist, or Other Nonmotorist
	(12) Making a U-turn	(80) Pedestrian in roadway (81) Pedestrian approaching roadway
	(13) Backing up (other than for parking position)	(82) Pedestrian—unknown location
	(14) Negotiating a curve (15) Changing lanes	(83) Pedalcyclist or other nonmotorist in roadway
	(16) Merging	(specify):
	(17) Successful avoidance maneuver to a previous	(84) Pedalcyclist or other nonmotorist approaching
	critical event	roadway, (specify):
	(97) Other (specify):	(85) Pedalcyclist or other nonmotorist - unknown
		location (specify):
	(99) Unknown	Object on Anject
	Critical Process Event	Object or Animal (87) Animal in roadway
32.	Citical Freciasii Event	(88) Animal in roadway (88) Animal approaching roadway
	This Vehicle Loss of Control Due To: (01) Blow out or flat tire	(89) Animal approaching roadway (89) Animal—unknown location
	(02) Stalled engine	(90) Object in roadway
	(03) Disabling vehicle failure (e.g., wheel fell off)	(91) Object approaching roadway
	(specify):	(92) Object—unknown location
	(04) Non-disabling vehicle problem (e.g., hood flew	(98) Other critical precrash event (specify):
	up) (specify):	
	(05) Poor road conditions (puddle, pot hole, ice, etc.)	(99) Unknown
	(specify):	
	(06) Traveling too fast for conditions	
	(08) Other cause of control loss (specify):	·
	(09) Unknown cause of control loss	
	103) GIIKIIOWII Cause OI COIRIOI 1033	

Attempted Avoidance Maneuver (00) No driver present (01) No avoidance maneuver (02) Braking (no lockup) (03) Braking (lockup) (04) Braking (lockup unknown) (05) Releasing brakes (06) Steering left (07) Steering right (08) Braking and steering left (09) Braking and steering right (10) Accelerating (11) Accelerating and steering left (12) Accelerating and steering right (98) Other action (specify): (99) Unknown	35. Pre-Impact Location (0) No driver present (1) Stayed in original travel lane (2) Stayed on roadway but left original travel lane (3) Stayed on roadway, not known if left original travel lane (4) Departed roadway (5) Remained off roadway (6) Returned to roadway (7) Entered roadway (9) Unknown 36. Accident Type (Note: Applicable codes on back of this page) (00) No impact Code the number of the diagram that best describes the accident circumstance
 (0) No driver present (1) Tracking (2) Skidding longitudinally—rotation less than 30 degrees (3) Skidding laterally—clockwise rotation (4) Skidding laterally—counterclockwise rotation (7) Other vehicle loss-of-control (specify): (9) Precrash stability unknown 	(98) Other accident type (specify): (99) Unknown

STOP HERE IF GV07 DOES NOT EQUAL 01 - 49

Cate:	Contigur-	ACCIDENT TYPES (includes intent)		
• • •	A Right Roadside	ONTROL/ AVOID COLLISION	04 SPECIFICS	05 SPECIFICS
1,61	Departure B	ROAD TRACTION LOSS WITH VEH., PED., ANIM.	OTHER	10
Single Driver	Left Roadside Departure	DRIVE OFF CONTROL/ ROAD TRACTION LOSS WITH VEH., PED., ANIM	SPECIFICS	SPECIFICS UNKNOWN
-	C Forward	11 12 13 14	- 15	16
	Impact	PARKED VEH. STA. OBJECT PEDESTRIAN/ END ANIMAL DEPARTURE	SPECIFICS OTHER	SPECIFICS UNKNOWN
	D Rear-End	20 21 24 22 23 24 25 27 27 31	(EACH • 32)	(EACH + 33)
Trafficway Direction		8TOPPED SLOWER DECEL. 31 21. 22. 23 28. 26. 27 28. 30. 31	SPECIFICS OTHER	SPECIFICS UNKNOWN
Sane Tral Sane Dire	E Forward Impact	CONTROL/ TRACTION LOSS TRACTION LOS	41 LLISION SPECIFIC	42)(EACH • 43) SPECIFICS UNKNOWN
=	F Sideswipe Angle	44 45 46 (EACH - 48) SPECIFICS OTHER		H • 49) PICS UNKNOWN
), In m	G Head-On	SO 51 (EACH + 52) (EACH + 53) SPECIFICS SPECIFICS UNKN	OWN	
Same Trafficway Oppiesie Direction	H Forward Impact	CONTROL/ TRACTION LOSS TRACTION LOSS WITH VEH. SA FEED 55 CONTROL/ TRACTION LOSS WITH VEH. SA FEED 55 CONTROL/ TRACTION LOSS WITH VEH. SA VOID COLLISION WITH OBJ	61 LUSION SPECIFIC	• 62)(EACH • 63) CS SPECIFICS UNKNOWN
=	l Sideswiper Angle	(EACH • 65) . (EACH • 67) SPECIFICS SPECIFICS UNKN LATERAL MOVE OTHER	IOWN	
afficway	J. Turn Across Path	MITTIAL OPPOSITE INITIAL SAME DIRECTIONS DIRECTIONS	(EACH • EPECIFIC OTHER	74) (EACH • 75) B SPECIFICS UNKNOWN
Change Trafficway Vehicle Turning	K. Turn Into Path	7 7 7 81 B	82 SPECIFIC	84) (EACH = 85) 8 SPECIFICS UNKNOWN
V Intersect ing Paths IV (Vehicle Damage)	L. Straight Paths	TURN INTO SAME DIRECTION TURN INTO OPPOSITE DIRECTION (EACH • 90) SS SPECIFICS OTHER	(EACH	
VI Miscel	M. Backing Eic		cident Type n Accident Type ct	

	OCCUPANT RELATED	44. Vehicle Cargo Weight O, O 1 0
37.	Driver Presence in Vehicle	Code weight to nearest 10 kilograms.
	(0) Driver not present (1) Driver present	(000) Less than 5 kilograms (450) 4,500 kilograms or more
	(9) Unknown	(999) Linknown
20	Number of Occupants This Vahiola	
38.	Number of Occupants This Vehicle (00-96) Code actual number of occupants	Source:
İ	for this vehicle	ROLLOVER DATA
İ	(97) 97 or more (99) Unknown	α
	2 1	45. Rollover (no overturning)
39.	Number of Occupant Forms Submitted 0 1	Rollover (primarily about the longitudinal axis)
	AIR BAG RELATED	(01-16) Code the number of quarter turns
40.	Is this an AOPS Vehicle?	(specify):
İ	(0) No (includes unknown) (1) Yes - researcher determined	(98) Rolloverend-over-end (i.e., primarily
	(2) VIN determined air bag system	about the lateral axis) (99) Rollover (overturn), details unknown
	(3) VIN determined automatic (passive) belts (4) VIN determined air bag and automatic	46. Rollover Initiation Type
	(passive) belts	(00) No rollover
41.	Air Bag(s) Deployment, First Seat Frontal	(01) Trip-over (02) Flip-over
	(0) Not equipped or not available	(03) Turn-over
	(1) No air bags deployed	(04) Climb-over (05) Fall-over
	Single Air Bag Vehicle (2) Driver air bag deployed	(06) Bounce-over
	(3) Driver air bag, unknown if deployed	(07) Collision with another vehicle (08) Other rollover initiation type specify):
	Multiple Air Bag Vehicle	· · · · · · · · · · · · · · · · · · ·
	(4) Driver side only deployed(5) Passenger side only deployed	(98) Rolloverend-over-end (99) Unknown rollover initiation type
	(6) Driver and passenger side deployed(7) Driver and passenger side unknown if	
	deployed	47. Location of Rollover Initiation (0) No rollover
	(8) Air bag(s) deployed, details unknown (9) Unknown	(1) On roadway
	A	(2) On shoulder—paved (3) On shoulder—unpaved
42.	Air Bag(s) Deployment, Other Than First Seat Frontal	(4) On roadside or divided trafficway median
	(0) Not equipped with an "other" air bag	(8) Rolloverend-over-end (9) Unknown
	(1) Deployed during accident (as a result of impact)	48. Rollover Initiation Object Contacted
	(2) Deployed inadvertently just prior to accident	(Note: Applicable codes on back of page)
	(3) Deployed, details unknown(4) Deployed as a result of a noncollision event	49. Location on Vehicle Where Initial Principal
	during accident sequence (e.g., fire, explosion, electrical)	Tripping Force Is Applied
	(5) Unknown if deployed	(0) No rollover (1) Wheels/tires
	(7) Nondeployed (9) Unknown	(2) Side plane
		(3) End plane (4) Undercarriage
	Specify type of "other" air bag present:	(5) Other location on vehicle (specify):
		(6) Non-contact rollover forces (specify):
	VEHICLE WEIGHT ITEMS	(8) Rolloverend-over-end
	VEHICLE WEIGHT HEWS	(9) Unknown
43	. Vehicle Curb Weight 1,370	50. Direction of Initial Roll
73	Code weight to nearest	(0) No rollover (1) Roll right - primarily about the longitudinal
	10 kilograms. (045) Less than 450 kilograms	axis
	(610) 6,100 kilograms or more	(2) Roll left - primarily about the longitudinal axis
	(999) Unknown 3.029 lbs x .4536 = 1.374 kgs	(8) Rolloverend-over-end (9) Unknown roll direction
	Source: 86 BRANHAMS +	(o) Onknown for direction
	185 Auto Nows	
	185 AUTO NOWS	

OVERRIDE/UNDERRIDE (THIS VEHICLE)	HIGHEST DELTA V
51. Front Override/Underride (this Vehicle) 52. Rear Override/Underride (this Vehicle) (0) No override/underride, or not an end-to-end impact between two CDS applicable vehicles, and no medium/heavy truck or bus underride Override (see specific CDC) (Between 2 CDS applicable vehicles (Bodytype, GV07 = 1-49)) (1) 1st CDC (2) 2nd CDC	58. Basis for Total (Resultant) Delta V (highest) (00) No vehicle inspection Delta V Calculated (01) Reconstruction program -damage only routine (02) Reconstruction program
(3) Other not automated CDC (specify): Underride (see specific CDC) [Between 2 CDS applicable vehicles (Bodytype, GV07 = 1-49)] (4) 1st CDC (5) 2nd CDC (6) Other not automated CDC (specify):	-damage and trajectory routine (O3) Missing vehicle algorithm Delta V Not Calculated (O4) At least one vehicle (which may be this vehicle) is beyond the scope of an acceptable reconstruction program, regardless of collision conditions.
(7) Medium/heavy truck or bus override (of any configuration) (9) Unknown HEADING ANGLE AT IMPACT FOR HIGHEST DELTA V Values: (000)-(359) Code actual value (997) Noncollision (998) Impact with object (999) Unknown	All vehicles within scope (CDC applicable) of reconstruction program but one of the collision conditions is beyond the scope of the reconstruction program or other acceptable reconstruction technique, regardless of adequacy of damage data. (05) Rollover (06) Other non-horizontal forces
53. Heading Angle For This Vehicle 54. Heading Angle For Other Vehicle RECONSTRUCTION DATA 55. Towed Trailing Unit (0) No towed unit (1) Yes—towed trailing unit (9) Unknown	(07) Sideswipe type damage (08) Severe override (09) Yielding object (10) Overlapping damage (11) All vehicle and collision conditions are within scope of one of the acceptable reconstruction programs, but there is insufficient data available, (specify):
56. Documentation of Trajectory Data for This Vehicle (0) No (1) Yes	(98) Other, (specify):
57. Post Collision Condition of Tree or Pole (For Highest Delta V) (O) Not collision (for highest delta V) with tree or pole (1) Not damaged (2) Cracked/sheared (3) Tilted <45 degrees (4) Tilted ≥45 degrees (5) Uprooted tree (6) Separated pole from base (7) Pole replaced (8) Other (specify):	

COMPUTER GENERAL	TED CRASH SEVERITY
59. Total Delta V Baseline Rearest kmph (highest) Nearest kmph (secondary) (NOTE: 000 means less than 0.5 kmph) (160)159.5 kmph and above (999)Unknown Highest Olive AB Nearest kmph (highest)	Highest 63. Impact Speed Nearest kmph (highest) Nearest kmph (secondary) (NOTE: 000 means less than 0.5 kmph) (160) 159.5 kmph and above (998) Trajectory algorithm not run (999) Unknown DELTA V CONFIDENCE LEVEL 64. Confidence In Reconstruction Program Results (For Highest Delta V)
Nearest kmph (secondary) (NOTE:000 means greater than	(0) No reconstruction (1) Collision fits model — results appear reasonable (2) Collision fits model — results appear high (3) Collision fits model — results appear low (4) Borderline reconstruction — results appear reasonable OTHER SPEED ESTIMATE Highest 65. Barrier Equivalent Speed
(NOTE:000 means greater than -0.5 kmph and less than +0.5 kmph) (±160) ±159.5 kmph and above (_999) Unknown 62. Energy Absorption	Nearest kmph (highest) Nearest kmph (secondary) (NOTE: 000 means less than 0.5 kmph) (160) 159.5 kmph and above (999) Unknown
Nearest 100 joules (highest) Nearest 100 joules (secondary) (NOTE: 0000 means less than 50 joules) (9997) 999,650 joules or more (9999) Unknown	
IS MISSING VEHICLE ALGORITHM APPLICATION OF THE SERVICE OF THE SER	· ·

ESTIMATED DELTA V	VEHICLE INSPECTION				
66. Estimated Highest Delta V (Researcher Determined) (0) Reconstruction Delta V coded Estimated Delta V (1) Less than 10 kmph (2) ≥ 10 kmph but < 25 kmph (3) ≥ 25 kmph but < 40 kmph (4) ≥ 40 kmph but < 55/kmph (5) ≥ 55 kmph Other estimates of damage severity (6) Minor (7) Moderate (8) Severe (9) Unknown	67. Type of Vehicle Inspection (0) No inspection (1) Vehicle fully repaired-no damage evident (2) Partial inspection (specify): (3) Complete inspection				

*** IF THE CDS APPLICABLE VEHICLE WAS NOT INSPECTED (I.E., GV67=0), ***

DO NOT COMPLETE THE EXTERIOR AND INTERIOR VEHICLE FORMS

*** IF GV07 DOES NOT EQUAL 01-49, DO NOT COMPLETE ***

THE EXTERIOR VEHICLE, INTERIOR VEHICLE,

OCCUPANT ASSESSMENT, AND OCCUPANT INJURY FORMS.



U.S. Department of Transportation

•	-
National Highway Trat Administration	ffic Safety

EXTERIOR VEHICLE FORM

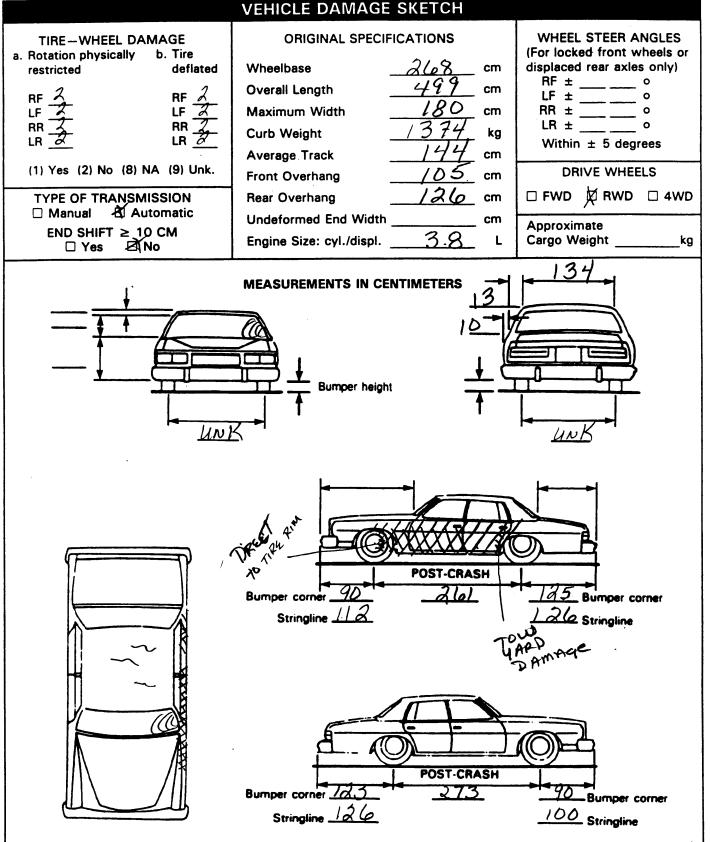
NATIONAL ACCIDENT SAMPLING SYSTEM CRASHWORTHINESS DATA SYSTEM

	ry Sampling Unit Nu Number - Stratum	^	51	<u>О</u> 3	. Vehicl	e Numb	er				22	
			VEHICLE	IDENTI	FICAT	ION						
VIN _/ F A B P 3 9 3 X F G Model Year 85							35					
Vehicle M	ake (specify):	FORD			Vehicle	Model (:	specify):		T7)		
			L(OCATO	R							
	e end of the damage amaged axle for side		ct to the vel	hicle lon	gitudina	l center	line or t	oumper (corner fo	or end i	mpacts	
Specific Impa	ecific Impact No. Location of Direct Damage		age		Location	of Field	L		Location of Max Crush			
01	17cm Det	and DF	Axle	between sill and beitline				line	C-4			
									•			
	CRUSH PROFILE IN CENTIMETERS											
Measure C1 to C6 from driver to passenger side in front or rear impacts and rear to front in side impacts. Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush. Use as many lines/columns as necessary to describe each damage profile.												
Specific Impact	Plane of Impact	Direct [Width	Damage Max	Field	C,	C,	C,	C ₄	C ₅	C _a	±D	
Number	C-Measurements	(CDC)	Crush	L					05	- ·	<u> </u>	
01	top of 5111	215	36	252	<u>8</u>	10	35	36	19	0	16	
	NO FREE SPACE										-	
										<u> </u>	 	
											<u> </u>	
				ļ			ļ				+	
											†	
						ļ					 	

ORIGINAL SPECIFICATIONS WORK SHEET

105.6 inches x 2.54 = 268 cm Wheelbase 196.5 inches x 2.54 = 499 cm Overall Length $\frac{7}{2} = \frac{7}{2} = \frac{180}{95}$ inches x 2.54 = $\frac{180}{95} = \frac{1}{95}$ Maximum Width $\frac{3,029}{56.8}$ pounds x 0.4536 = $\frac{1,373}{444}$ kg **Curb Weight Average Track** inches x 2.54 = $\frac{105}{100}$ cm **Front Overhang** inches x 2.54 = $\frac{126}{}$ cm Rear Overhang ___.__ inches x 2.54 = _____ **Undeformed End Width** <u>3.8</u> l ____ cc x 0.001 = Engine Size: cyl/displ. $\frac{2}{2}$ $\frac{3}{2}$ CID x 0.0164 = 3.8 L Vb 5-possengers, 4-doors Auto News LTD Curb Weight 4 ey 3001
Branham LTD Addition for 6 ey 28

Special Crash Investigation Addendum		
Submodel Designation: {specify} LID Color: {specify} GRAY Repair Cost: \$		
Transmission: {circle} (Automatic Manual Speed: 3-speed 4-speed 5-speed Other:		
Steering: {circle} Power-assisted Manual Type: rack-and-pinion worm-and-gear Other		
{please describe}:		
Brakes: {circle} Power-assisted Manual Type: 4-wheel disc 4-wheel drum 4-wheel hydraulic front disc, rear drum Other:		
Observed Defects: {specify}		
The state of the s		
Fleet Type: {circle} Private vehicle Rental vehicle Leased vehicle Commercial vehicle Other		
{please describe}:		



NOTES: Sketch new perimeter and cross hatch direct damage and single hatch induced damage on all views. Annotate observations which might be useful in reconstructing the accident (e.g., grass in tire bead, direction of striations, scuff on sidewalls, etc.). If pulling trailer, sketch type of trailer and damage received on the back of this page.

Annotate any damage caused by extrication such as component removal by torching, prying, or hydraulic shears.

	America	an Road, 🛭			48121	
Type of Body Pass. Cap.	Model	O'r-all Longth	Ship. WL	Cu. Ft. Vol.	Factory List Pr.	Factory Del'd Pr.
1984						
1984 Optional Equip.: Muster	ng GT, LTD)OR		
		Ship.	Fact.	Musta: GT	ng LTD Sedans	LTD
572 Air Canditiones Automat	N.	Wgt.	List 809			Wago
573 Air Conditioner—Automa 570 Defroster, Elec., Rear Wi	nd.	58 2	140	NA E	E E	É
923 Glass—linted (Complete)			110	Ē	Ē	E
963 Lock GroupPower		6	254	177	E	Ē
547 Luggage RackStation V 584 RadioAM/FM Stereo	agon	8 6	126 109	NA E	NA E	E
525 Speed Control, Fingertip		ž	176	Ē	Ē	Ē
53A Seet, Power—Single Con	trol	40	224	NA	E	E
520 Tilt Steering Wheel 64P Power Windows		16	110 272	E 198	E E	E E
422 Calif. Emission System		2	99	Ĕ	È	Ē
1985						
Ford EXP & Excort :	Series (4-C)	rl. 97.6 CID-	-1.6 L	2-bbl. Carb.	Oct. 4, 1984	ı.
Bore & Stroke 3.	15″x3.1 3″ ;	Tax. H.P. 15	i.88; PLD.	97.6 cm. in	(1.6 Liter)	
EXP Series—94.2" w.b. 2-Ps. 3-dr. Sport Coupe 67D	300A	170.3"	2.095	327.9	\$7,020.00	\$7,020.0
2-Ps. 3-dr. Luxurp Cpe. 67D	301A	170.3"	2,116	327.9	7,908.00	7,908.0
EXP Series—94.2" w.b. (1.6			, Turbo)			
2-Ps. 3-dr. Turbo Coupe 67D	302A	170.3"	2,135	327.9	\$10,320.00	\$10,320.0
Escort Series-94.2" w.b.	CVIU 2 LL	/002 /4335	41B 4-/4	end Tonna	Manual	
Base Fuel Sever (FS) 1.6 L. 4-Ps. 2-dr. Hatchback 61D	PO4	166.8"	41F (W/4	- 394. 17 90% 339.1	, Manual) \$5,928.00	\$5,928.0
4-Ps. 4-dr. Hatchback 580	P13	166.8"		339.1	6,135.00	6,135.0
Escert L Series-with 4-Spd.	Manual Tr	ons. (Eng. 95	12)			
4-Ps. 2-dr. Hatchback 61D	P04	166.8″	1,977	339.1	\$6,184.00	\$6,184.0
4-Ps. 4-dr. Hatchbeck 58D 4-Ps. 4-dr. 2-st. Sta. Wag/ 7	P13 4D P09	166.8″ 165.0″	2,042 2,069	339.1 335.4	6,399.00 6,613.00	6,399.0 6,613.0
Escert GL-4-Spd. Manual T			2,000	000.4	0,010.00	0,010.
4-Ps. 2-dr. Hatchback 61/D/C1	/B PÔ5 T	166.8"	2,045 2,210	339.1	\$6,682.00	\$6,682.0
4-Ps. 4-dr. Hatchback 580/C	/B P14	166.87	2,210	339.1	6,896.00	6,896.0
4-Ps. 4-dr. 2-st. Wag. 74D/C		165.0"	2,139	335.4	7,073.00	7,073.0
Escort LX-Electronic Fuel 4-Ps. 4-dr. Hatchback 58D/B	YB P15	166.8"	2,162	339.1	\$8,148.00	\$8,148.0
4-Ps. 4-dr. 2-st. Wag. 74D/B		165.0"	2,185	335.4	8,239.00	8,239.
Escort GT-with EFI and 5-S						
4-Ps. 2-dr. Hatchback 61D/B		166.8″	2,127	339.1	\$7,893.00	\$7,893.
Escart-Turbo GT-5-Spd. M 4-Ps. 2-dr. Turbo Hatchback	enuel Tree P07/935	166.8"	996) NA	339.1	\$8,988.00	\$8,988.
Engine (Gas): 4-cyl. 9	7.6 cu. in.	1.6 L. 2-1	obl. cents	indine. tre	nsverse. comp	. ratio 9
Engine (Gas): 4-cyl. 9 to 1, net bhp. 70 at 4600 Trans. (MTXI), fuel tank 13	rpm., net	torque 88 at	2600 ft.	/lbs., single	exhaust, Mei	nual 4-Sp
manual steering, Battery 12\	gais., PWI /.310 amne), Tires: P16:	5/80R13	Steel Beited	Radial, 35 lbs	s. pressur
1985 EXP & Escort Optional		,				
1965 EXF & Escort Options	cquip	Ship	1	Fact		
Engines:		Wgt. 230		List	EXP	Eacor
99H 4-Cyl. 2.0 L. Diesel Celif. Emission System		230		\$558 46	NA E	E E
445 5-Spd. Menual Trans.		10		76	รั	Ē
440 Split Torque Auto. Trans.		84		439	363	Ē
572 Air Cond., Manual		47 7		643 39	E	E
582 Radio AM		21		315	E SE E	È
582 Radio, AM 21C Roof, Flip-Up/Sun					Ē	Ē
582 Radio, AM 21C Roof, Flip-Up/Sun 525 Speed Control		4		176	=	
582 Radio, AM 21C Roof, Flip-Up/Sun 525 Speed Control 52H Power Steering (1)		8		215	Ē	Ę
582 Radio, AM 21C Roof, Filp-Up/Sun 525 Speed Control 52H Power Steering (1) 552 Brakes, Power Front Disc 52Q Steering Wheel, Tilt		4 8 4 6		215 95 104	S E	
582 Radio, AM 21C Roof, Flip-Up/Sun 525 Speed Control 52H Power Steering (1) 552 Brakes, Power Front Disc 52Q Steering Wheel, Tilt 548 Luggage Rack, Dix. (S.W.		8 4 6 12		215 95 104 100	S E NA	E E
582 Radio, AM 21G Roof, Flip-Up/Sun 525 Speed Control 52H Power Steering (1) 552 Breks, Power Front Disc 52Q Steering Wheel, Tilt 548 Luggage Rack, Dix. (S.W 184 Console		8 4 6 12 5		215 95 104 100 111	S NA NA	E E
582 Radio, AM 21C Roof, Flip-Up/Sun 525 Speed Control 52H Power Steering (1) 552 Brakes, Power Front Disc 52Q Steering Wheel, Tilt 548 Luggage Rack, Dix. (S. W 184 Console 57Q Defroster, Rear Window 923 Glass—Tintod, Complete	'.)	8 4 6 12 5 1		215 95 104 100 111 130 95	S E NA NA S E	EEEEE
582 Radio, AM 21C Roof, Flip-Up/Sun 525 Speed Control 52H Power Steering (1) 552 Brakes, Power Front Disc 52Q Steering Wheel, Tilt 548 Luggage Rack, Dix. (S.W 184 Console 57Q Defroster, Rear Window 923 Glass—Tindd, Complete 173 Wiper, Washer, Rear Win	'.)	8 4 6 12 5 1 1	•	215 95 104 100 111 130 95	S E NA NA S E NA	EEEEEE
582 Radio, AM 21c Roof, Flip-Up/Sun 525 Speed Control 52H Power Steering (1) 528 Power Steering (1) 529 Steering Wheel, Tilt 548 Luggage Rack, Dix. (S.W 184 Console 570 Defroster, Reer Window 923 Glass—Tinted, Complete 173 Wiper, Washer, Reer Win 962 Locks, Power Door 2-dr.,	dow /4-dr.	8 4 6 12 5 1 1 13 4		215 95 104 100 111 130 95 46/120 24/176	S E NA S E NA NA	***************************************
582 Radio, AM 21G Roof, Flip-Up/Sun 525 Speed Control 52H Power Steering (1) 522 Brakes, Power Front Disc 52Q Steering Wheel, Tilt 548 Lugzage Rack, Dix. (S.W. 184 Console 57Q Defroster, Rear Window 923 Glass—Tintad, Complete 173 Wiper, Washer, Rear Wir 962 Locks, Power Door 2-dr., Ferd Mustang, Tem Bore & Stroks	.) idow /4-dr. po, LTD, T 3,78743.12	8 4 6 12 5 1 1 13 4 hunderbird (4 ": Tax: H.P.	Cyl. 140 22.87; P.	215 95 104 100 111 130 95 16/120 24/176 CID-2.3 L. 1 D. 140 cm.	S E NA S E NA NA	***************************************
582 Radio, AM 21G Roof, Flip-Up/Sun 525 Speed Control 52H Power Steering (1) 522 Brakes, Power Front Disc 52Q Steering Wheel, Tilt 548 Lugzage Rack, Dix. (S.W. 184 Console 57Q Defroster, Rear Window 923 Glass—Tintad, Complete 173 Wiper, Washer, Rear Wir 962 Locks, Power Door 2-dr., Ferd Mustang, Tem Bore & Stroks	.) idow /4-dr. po, LTD, T 3,78743.12	8 4 6 12 5 1 1 13 4 hunderbird (4 ": Tax: H.P.	Cyl. 140 22.87; P.	215 95 104 100 111 130 95 16/120 24/176 CID-2.3 L. 1 D. 140 cm.	S E NA NA S E MA NA I-bbl.) 9/12/8 in. 2.3 Liter	E E E E E E E
582 Radio, AM 21c Roof, Flip-Up/Sun 525 Speed Control 52H Power Steering (1) 528 Power Steering (1) 529 Steering Wheel, Tilt 548 Luggage Rack, Dix. (S.W 184 Console 570 Defroster, Reer Window 923 Glass—Tinted, Complete 173 Wiper, Washer, Reer Win 962 Locks, Power Door 2-dr.,	.) idow /4-dr. po, LTD, T 3,78743.12	8 4 6 12 5 1 1 13 4 hunderbird (4 "; Tax. H.P. Eng. (99A) 2 179.3"	Cyl. 140 22.87; P.	215 95 104 100 111 130 95 16/120 24/176 CID-2.3 L. 1 D. 140 cm.	S E NA S E NA NA	***************************************

— 28 —

FORD Motor Co	., The Amer	ican Roa	d, C	ديس (الد	48121	l
Type of Body Pass. Cap.	Model	O'r-a	ıll Shi	p. Cu. Ft. . Vol.	Factory List Pr.	Factory Dol'd Pr.
1985						
ompo L Model 99.9	W.b.—Gas En	g. (99X) E	FI 2300 High	Swirt Cambr	estion (HSC)	
)-Ps. 2-dr. Sedan 560	PIS	176.2	7 2.264	367.0	\$7,450.00	\$7,450.0
-Ps. 4-dr. Sedan 54D	P21	176.2	2,321	367.0	7,450.00	7,450.0
empe GL Model—99	.9" w.b.—Gas 1	Eng. (99X)				
o-Ps. 2-dr. Sedan 66D	P19	176.2 176.2	." 2,289 ." 2,348	367.0	\$7,558.00	\$7,558.0
-Ps. 4-dr. Sedan 54D	P22	176.2	2,348	367.0	7,558.00	7,558.0
empo GLX Model-9:	9.9" w.bGes	Eng. (99X)				
Ps. 2-dr. Seden 660	P20 P23	176.2 176.2	″ 2,320 ″ 2,377	367.0	\$8,651.00 8,700.00	\$8,651.00 8,700.00
-Ps. 4-dr. Sedan 54D				367.0	8,700.00	8,700.0
fodel (TD Sedans) (I -Ps. 4-dr. Sedan 540	05.6" w.b) - 0	Eng. (994) 196.5	2,801	434.4	\$9,300.00	\$9,300.0
-rs. 4-dr. Broughem				٠٠٠٠٠	40,000.00	V 0,000.0
Section 54D	P39/60	H \196.5	"	434.4	9,688.00	9,688.0
hunderbird Turbe Cou- Ps. 2-dr. Coupe 63D Engine (99A, T.) ion (HSC), Comp. ri pm., single exhaudt,	90104.0" H.	Cos En	. (99W) EF	Turbe		
Ps. Z-dr. Coupe 530	P46/93	197.6	″ 2,950	432.5	\$13,797.00	\$13,797.0
on (HSC). Comp. ra	ntio 9.5 to 1	o cu. in., net bbn 88	2.3 L., 1.0	wn nefform	1104, Fign 34	he et 260
pm., single exhaust,	manual 4-spd	trans. to	Autometic	3-spd. trans.	Fuel tank,	to 16 gals
985 Ontional Faula	Mustage Tom	- 170 T	underbled:	•		_
985 Optional Equip.:		Ship.	Fact.			
uk tudi			List Me	stang Temp	e LTD	Thunderbir
93 (76-232-3.8 L, EF) 9M (78-302-5.0 L,	w/Auto Tr.	139	\$439	E NA	\$418	S
9M V8-302-5.0 LL	X Conv.	139	152	E NA	S	398
	LX Sans.	176 23	1000 124	E NA E S	S	NA S
40 SelectShift Autom		70	439	Ē 363	I NA S	315
4T Automatic Overdri	ve GT	NA	676	E NA	Š	237
4T Autometic Overdri 5A Traction-Lok Axie	w LX	NA .	551	E NA		<u>s</u>
DA Traction-Lok Axie 2H Power Steering		(1)	95 223	E Pkg S 223	. E	E
72 Air Cond., Man./	kuto	49 7	43/809	S 223	S	743/905
84 Console		8	191	E Pkg		743/905 NA
70 Defroster, Rear W 63 Power Lock Group Power Lock Group	ind.	2	140	E E	E	E
63 Power Lock Group	LX/GT	NA 2	10/177	Ë Pkg NA 202/2	. NA	NA 213
R7 RadioAM /FM w		1/2	NA 148	NA 202/2 E 109	54 /254 109	213 E
87 Radio—AM/FM w 86 Radio, AM/FM St 25 Speed Control	ereo, Elect.	11	300	Ĕ Ĕ	409	Ē
25 Speed Control		6	176	E E	Ε	Ē
2G Tilt Steering When	bi 	4	110	E S	Ē	
22 Calif. Emissions S 4R Windows, Power S	ystem de	1 16	99 272	E E Pkg	. E	E 198
				2 30W-3 30%	. E	
Engine (Dissel 9 atio 22.7 to 1, net	bho. 52 at 400	Cu. In. 2 O rome. no	.U L., Des	3.39"X3.39", ft /lbe at 2	18X. H.P. 400 mm els	, Com
MANUSA 3-KNO. IMANE						
For 1985 Tempo	Models, to rep	ace Gas Er	w. (99X) wil	th Diesel Eng	. (99H), add	97 lbs. an
479.00 to figures sh	lown.					
Ford 11	d. Mustane &	Thursdark)	6 (VR-232 CI	D-3.8 L. FFI	1 10/4/84	
Bore &	d., Mustang & Stroke 3.87x3.4 105.67 w.b.—8	"; Tex. H.F	. 34.66: P.C	1. 232 cu. in.	. 3.8 Litera	
Accorded to all designations of the contract of the contra	100.0 H.D.		MITTER (KREU)			
-Ps. 4-dr. Sta. Wago			7 2,965	439.2	\$9,810.00	\$9,810.0
Rustang LX Model Co		5" w.b.				
I-Ps. 2-dr. Convertible 66B (B2L)	P27/6	02 179.9	2,862	373.5	\$12,359.00	\$12,359.0
	INE Nº w b0	- F /86	19) FEI Co-	3/3.3	412,333.00	412,333.0
hunderbird (RWD)—: -Ps. 2-dr. Thunderbir	d 63D P46	197.6	7.937	432.5	\$10,681.00	\$10,681.0
lan Model104.0"					****	410,001.
Ps. 2-dr. Slan 630	P46/6	07 197.6	5″ 2,993	432.5	\$12,348.00	\$12,348.0
	•		2,333	432.3	\$12,540.00	412,346. 0
ila Model—104.0" : i-Ps. 2-dr. Fila 63D		AC 107 6	.// 2.027	122 5	#1E 40C 00	#15 AOG (
Foring /002\ C-	P46/6	06 197.6	2,937	432.5	\$15,406.00	+10,400.0
Engine (993) Ga 120 at 5600 rpm., Auto. Trans. Fuel tan P195/75R14 BSW St 35 lbs. rear; Thunds	is. VO-232 CU. net tomue 205	in., J.8 ∐i ft/lhe: =	ær, ∠∙DDI.(† 1600 rom	eingle eve	of 1.8 Older	I, not bhi
Auto. Trans. Fuel tan	ks: Mustang 15	4 gals.; Li	d. 16 gais.:	Thunderbird	20.6 gals. Ti	onnic 3-390 res: Musten
195/75R14 BSW St	eel Belted Radi	al, 35 lbs.	pressure; L	td. same size	e, pressure 2	B lbs. fron
	whited P205/704	lead? AIS	Belted Redi	al. 30 lbs.	Dressure.	
o ios. rear; inunce	MDIIG 1203/704	, 0.001		,	.	
1985 Ford LTD Sta.	Wag., Mustang	LX Model	Convertible	Thunderbire	l Optional Es	ruio.:

1965 Ford LTD Stz. Wag., Mustang LX Model Convertible, Thunderbird Uptonal Equip.:

Ship. Fact. LTD Hustang Thunder LX (Conv.) bird Style

			CDC	WORKSHE	ET			
		C	ODES FOR	OBJECT CON	ITACTED			
(01-30)	– Vehicle Nu	ımber		(5)	7) Fence			
(050)	, , , , , , , , , , , , , , , , , , , ,			• -	B) Wall			
Noncol	lision			•	Building	1		
		ollover (excludes	end-over-er) Ditch o			
	Rollover-end) Ground			
	Fire or explos			•	2) Fire hyd			
(34)	Jackknife			(6:	3) Curb			
(35)	Other intraun	it <mark>dama</mark> ge (specit	y):	(64) Bridge			
				(68	3) Other fi	xed object (specify):	
	Noncollision i							
(38)	Other noncoll	ision (specify):		(69	9) Unknow	vn fixed obje	ect	
(39)	Noncollision -	 details unknow 	/n			onfixed Objeger car, light		or other
Callieia	n With Fixed C	hiest		()(not in-transp		Of Other
		m in diameter)		17:				in-transport
		m in diameter)			2) Pedestri		COI DUS IIO	in-transport
	Shrubbery or				3) Cyclist			
	Embankment	5 00				onmotorist c	or-convevan	ce ·
		-1	.					
(45)	breakaway po	ole or post (any o	nameter)) Vehicle 3) Animal	occupant		
Nonbro	akaway Polo o	r Post		, , ,	7) Train			
	akaway Pole o	r Post ≤ 10 cm in diam	eter)			Trailer, disconnected in transport		
		> 10 cm but ≤				Object fell from vehicle in-transport		
(51)	diameter)	> 10 cm but 5	30 cm m			Other nonfixed object (specify):		
(52)		> 30 cm in diam	neter)	,0,	, Other 11	ominada obje	c (Specify)	•
		diameter unknow		(89	Unknow	vn nonfixed (object	
(54)	Concrete traf	fic barrier		(98	3) Other e	vent (specify	<i>(</i>):	
	Impact attenu	iator parrier (includes g	wardrail\	100) Hokoow	vn event or c	hiect	
(50)	(specify):			(5.	o, Olikilov		Dject	
		DEFORMAT	ION CLASS	SIFICATION B	Y EVENT N	NUMBER		· · · · · · · · · · · · · · · · · · ·
					(4)	(5)		
Accident		(1) (2)			Specific	Specific	(6)	
Event	Ohiona	Direction	Incremental		Longitudinal	Vertical or	Type of	(7)
Sequence Number	Object Contacted	of Force (degrees)	Value of Shift	Deformation Location	or Lateral Location	Lateral Location	Damage Distribution	Deformation Extent
2_	01	<u> </u>		<u>_</u>	Y	E	$\overline{\mathcal{W}}$	03
					<u> </u>			
								
								
				****			•	
								
			<u>-</u>					

11000100 710010	(COLLISION	DEFORMA	TION CLAS	SIFICATIO	N	
HIGHEST D	ELTA "V"						
Accident Event Sequence Number	Object Contacted	(1) (2) Direction of Force	(3) Deformation Location	(4) Longitudinal or Lateral Location	(5) Vertical or Lateral Location	(6) Type of Damage Distribution	(7) Deformation Extent
4.01	5. <u>Ø</u> <u>/</u>	6. <u>/</u> <u>O</u>	7. <u>L</u>	8	9. <u>E</u>	10. <u>W</u>	11. <u>03</u>
Second Hig	ghest Delta "V						
12	13	14	15	16	17	18	19
		CRUS	H PROFILE	IN CENTIM	ETERS		
	The crush pro	file for the dar	nage described below. (ALL N	in the CDC(s)	above should	be documente	ed
	in the appr	opilate space	Delow. (Alle iv				
HIGHEST [DELTA "V"						
20. L	21. 				C ₅	C ₆	22.
252	000	010	035	036 0	19 0	000	006
Second Hig	ghest Delta "V	•	·			•	
23. L	24. 				C ₅	C ₆	25. ±D
							<u>+</u>
(Coded impact (250) (998)	250 centimete No highest sev	severity e impact.) earest centimet es or more		(650) (999)	al Wheelbase Code to the n centimeter 650 centimete Unknown		268 centimeters
27. Direct (For hig	Unknown Damage Width ghest severity i Code to the ne 250 centimete Unknown	mpact) earest centimet	<u>215</u> ter	(185)	al Average Trac Code to the n centimter 185 centimet Unknown inches	earest	centimeters

			FUEL SYSTEM
31.	Are CDCs Documented but Not Coded on The Automated File? (0) No (1) Yes Researcher's Assessment of Vehicle Disposition (0) Not towed due to vehicle damage (1) Towed due to vehicle damage (9) Unknown Is This A Multi-Stage Manufactured Vehicle		35. Location of Fuel Tank-1 Filler Cap 36. Location of Fuel Tank-2 Filler Cap (0) No fuel tank (1) On back plane (2) Aft of center of the rear wheels (rear axle) on left side plane (3) Aft of center of the rear wheels (rear axle) on right side plane (4) Forward of center of the rear wheels (rear axle) on left side plane (5) Forward of center of the rear wheels (rear axle) on right side plane (6) Over the center of the rear wheels (rear axle) on left side plane (7) Over the center of the rear wheels (rear axle) on right side plane
	And/Or A Certified Altered Vehicle? (O) No post manufacturer modifications (1) Yes - post manufacturer modifications (specify): (Include photograph of CERTIFICATION PLACARD in case report) (9) Unknown if vehicle is modified		(8) Other (specify): (9) Unknown 37. Type of Fuel Tank-1 38. Type of Fuel Tank-2 (0) No fuel tank (electrical vehicle) (1) Metallic (2) Non-metallic (9) Unknown
	FIRE OCCURRENCE		39. Location of Fuel Tank-1
	Fire Occurrence (0) No fire Yes, fire occurred (1) Minor (2) Major (9) Unknown Origin of Fire (0) No fire (1) Vehicle exterior (front, side, back, top) (2) Exhaust system (3) Fuel tank (and other fuel retention system parts) (4) Engine compartment (5) Cargo/trunk compartment (6) Instrument panel (7) Passenger compartment area (8) Other location (specify): (9) Unknown	0	40. Location of Fuel Tank-2 (0) No fuel tank (1) Aft of center of the rear wheels (rear axle) centered (2) Aft of center of the rear wheels (rear axle) left side (3) Aft of center of the rear wheels (rear axle) right side (4) Forward of center of the rear wheels (rear axle) centered (5) Forward of center of the rear wheels (rear axle) left side (6) Forward of center of the rear wheels (rear axle) right side (7) Over center of the rear wheels (rear axle) right side (8) Other (specify): (9) Unknown 41. Damage to Fuel Tank-1 42. Damage to Fuel Tank-2 (0) No fuel tank (1) No damage to fuel tank (2) Deformed, no seam failure (3) Deformed, with a seam failure (4) Punctured (5) Lacerated (ripped) (6) Abraded (scraped) (7) Filler neck separation from the fuel tank (8) Other damage (specify): (9) Unknown
-	•		

		T A
43. L	eakage Location of Fuel System-1	47. Is This Vehicle Equipped With More Than Two Fuel Tanks?
	eakage Location of Fuel System-2	(O) No (one or two tanks only)
44. L	Bakage Location of the Control of th	1-1
	O) No fuel tank	Yes - More Than Two Tanks
(1) No fuel leakage	
		(1) Yes - no damage to any tank or filler
	Primary Area Of Leakage	cap and no fuel system leakage
	2) Tank	(2) Yes no damage to any tank or filler
		cap but there is fuel system leakage
	3) Filler neck	(specify leakage location):
	4) Cap	(specify leakage location).
(5) Lines/pump/filter	
i	6) Vent/emission recovery	(3) Yes damage to an additional tank or
	8) Other (specify):	filler cap and there is fuel system leakage
	9) Unknown	(specify the following):
,	5) Unknown	Type of tank
	~ 1	
45. F	Fuel Type-1	Filler cap location
	^ ^	Tank damage
46	Fuel Type-2	Location of leakage
+ U , [Type of fuel
	Single Fuel Type	(9) Unknown if more than two tanks
	Single Fuel Type	(a) anniem mana mana annie
	(00) No fuel tank	
1	(01) Gasoline	
- ((O2) Diesel	
i	(03) CNG (Compressed Natural Gas)	COMMENTS
7	(04) LPG (Liquid Petroleum Gas) also	
,	known as Propane	
((05) LNG (Liquid Natural Gas)	
	(06) Methanol (M100 or M85)	
(07) Ethanol (E100 or E85)	
((08) Other (Hydrogen or others) (specify):	
	Electric Powered or Electric/Solar	
-	Powered Vehicles	
-	(10) Lead Acid Battery	
	(11) Nickel-Iron Battery	
	(12) Nickel-Cadmium Battery	
	(13) Sodium Metal Chloride Battery	
	(14) Sodium Sulfur Battery	
1	(18) Other (Specify):	
	- -	
	(98) Other Hybrid (specify):	
	•	
	(99) Unknown fuel type	
	1991 Gurungan igni rika	
		NEWSTERNAL MAN NOT TOWER 444
I	*** STOP: IF THE CDS APPLICAE	BLE VEHICLE WAS NOT TOWED ***
!	(GV	10 = 0)
	DO NOT COMPLETE THE	INTERIOR VEHICLE EORM
	DO NOT COMPLETE THE	INTERIOR VEHICLE FORM.

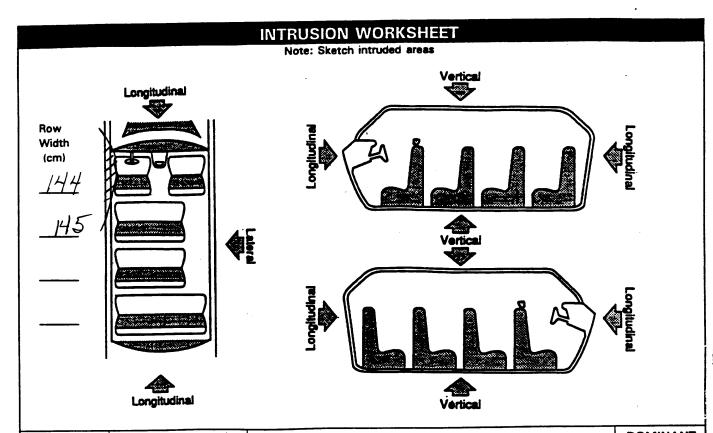
INTERIOR VEHICLE FORM

NATIONAL ACCIDENT SAMPLING SYSTEM CRASHWORTHINESS DATA SYSTEM

National Highway Traffic Safety

Administration	GLAZING
1. Primary Sampling Unit Number	Type of Window/Windshield Glazing
2. Case Number - Stratum $\frac{9517}{}$	15. WS 16. LF 2 17. RF 2 18. LR 2 19. RR 2
3. Vehicle Number \mathcal{A}	20. BL 7 21. Roof O 22. Other Z
INTEGRITY	20. BL 21. Root 22. Other 27
4. Passenger Compartment Integrity (00) No integrity loss Yes, Integrity Was Lost Through (01) Windshield (02) Door (side) (03) Door/hatch (back door) (04) Roof (05) Roof glass (06) Side window (07) Rear window (backlight) (08) Roof and roof glass (09) Windshield and door (side) (10) Windshield and roof (11) Side and rear window (side window and backlight) (12) Windshield and side window (13) Door and side window (98) Other combination of above (specify):	(0) No glazing (1) AS-1 — Laminated (2) AS-2 — Tempered (3) AS-3 — Tempered-tinted (original) (4) AS-2 — Tempered-with after market tint (5) AS-3 — Tempered-tinted (with additional after market tint) (6) AS-14 — Glass/Plastic (7) Glazing removed prior to accident (8) Other (specify): (9) Unknown Window Precrash Glazing Status 23. WS / 24. LF / 3 25. RF / 26. LR / 27. RR / 28. BL / 29. Roof / 30. Other / (0) No glazing (1) Fixed (2) Closed (3) Partially opened (4) Fully opened (7) Glazing removed prior to accident
Door, Tailgate or Hatch Opening 5. I.F. 3 6. RF / 7. LR 3 8. RR / 9. TG/H 0	(9) Unknown Glazing Damage from Impact Forces 31. WS 232. LF 633. RF 34. LR 35. RR
(0) No door/gate/hatch (1) Door/gate/hatch remained closed and operational (2) Door/gate/hatch came open during collision (3) Door/gate/hatch jammed shut (8) Other (specify):	36. BL 37. Roof 38. Other (0) No glazing (1) No glazing damage from impact forces (2) Glazing in place and cracked from impact forces (3) Glazing in place and holed from impact forces (4) Glazing out-of-place (cracked or not) and not holed from impact forces (5) Glazing out-of-place and holed from impact forces (6) Glazing disintegrated from impact forces
Damage/Failure Associated with Door, Tailgate or Hatch Opening in Collision. If IV05-IV09 ≠ 2, Then code Ø	(7) Glazing removed prior to accident (9) Unknown if damaged
10. LF <u>O</u> 11. RF <u>O</u> 12. LR <u>O</u> 13. RR <u>O</u> 14. TG/H <u>O</u>	Glazing Damage from Occupant Contact 39. WS
(0) No door/gate/hatch or door not opened	1
Door, Tailgate or Hatch Came Open During Collision (1) Door operational (no damage) (2) Latch/striker failure due to damage (3) Hinge failure due to damage (4) Door structure failure due to damage (5) Door support (i.e., pillar, sill, roof side rail, etc.) failure due to damage (6) Latch/striker and hinge failure due to damage (8) Other failure (specify):	44. BL 45. Roof 46. Other (0) No glazing (1) No occupant contact to glazing (2) Glazing contacted by occupant but no glazing damage (3) Glazing in place and cracked by occupant contact (4) Glazing in place and holed by occupant contact (5) Glazing out-of-place (cracked or not) by occupant contact and not holed by occupant contact (6) Glazing out-of-place by occupant contact (7) Glazing removed prior to accident
	(8) Glazing disintegrated by occupant contact

(9) Unknown if contacted by occupant

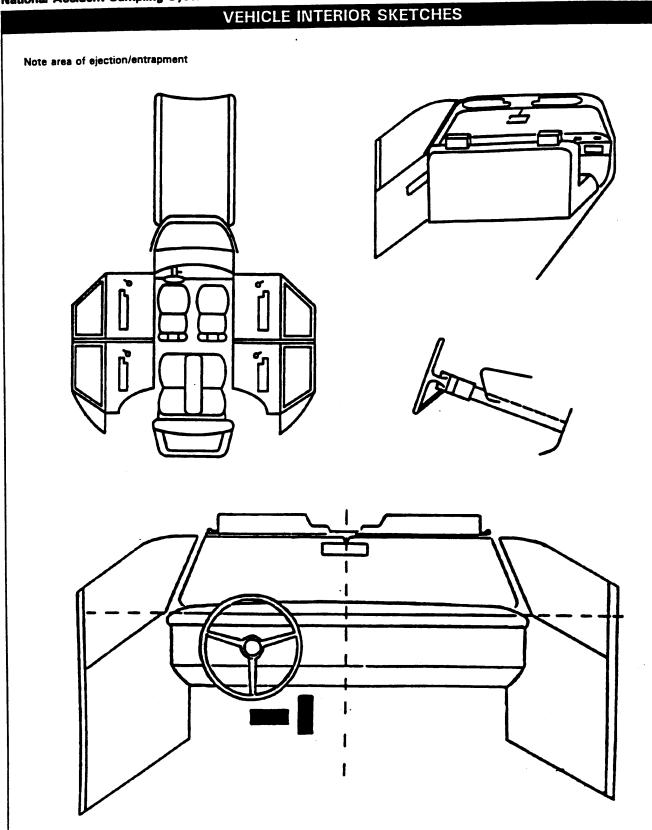


LOCATION OF INTRUSION	INTRUDED COMPONENT	COMPARISON VALUE	Meas	rements Are in Cen INTRUDED VALUE	timeters) =	INTRUSION	DOMINANT CRUSH DIRECTION
11	DOOR	131	_	101	=	30	LAT
11	B-PILLAR	128	-	106	=	22	LAT
2\	DOOR	145		140	=	5	LAT
11	Kick? Mnel	54	_	26	=	28	LAT
11	Geat Back	0	. –	0	=	0	LAT
11	seat cush	49.5	-	41	=	7.5	LAT
			-		*		
			_		=		
			_		=		
			_		=		
			_		=		
			_		=		
			_	•	=		
			_		=		
			_		=		

OCCUPANT AREA INTRUSION							
Note: If no intrusion	ns, leave variables IV47-IV86 blank.	INTRUDING COMPONENT					
Location of Intrusion		Interior Components (01) Steering assembly (02) Instrument panel left (03) Instrument panel center					
1st 47	48. <u> </u>	(O4) Instrument panel right (O5) Toe pan (O6) A (A1/A2)-pillar (O7) B-pillar					
2nd 51	52. <u>10</u> 53. <u>3</u> 54. <u>3</u>	(08) C-pillar (09) D-pillar (10) Side panel - forward of the A1/A2-pillar (11) Door panel (side)					
3rd 55	56. <u>0</u> 7 57. <u>3</u> 58. <u>3</u>	(12) Side panel - rear of the B-pillar (13) Roof (or convertible top) (14) Roof side rail					
4th 59	60. <u>25</u> 61. <u>1</u> 62. <u>3</u>	(15) Windshield (16) Windshield header (17) Window frame (18) Floor pan (includes sill)					
5th 63. <u>2</u> <u>/</u>	64. <u>//</u> 65. <u>/</u> 66. <u>3</u>	(19) Backlight header (20) Front seat back (21) Second seat back (22) Third seat back					
6th 67	68 69 70	(23) Fourth seat back (24) Fifth seat back (25) Seat cushion (26) Back door/panel (e.g., tailgate) (27) Other interior component (specify):					
7th 71	72 73 74						
8th 75	_ 76 77 78	(30) Hood (31) Outside surface of this vehicle (specify):					
9th 79	_ 80 81 82	(32) Other exterior object in the environment (specify):					
10th 83	84 85 86	(specify):(99) Unknown					
Front Seat (11) Left (12) Middle (13) Right	RUSION Fourth Seat (41) Left (42) Middle (43) Right	MAGNITUDE OF INTRUSION (1) ≥ 3 centimeters but < 8 centimeters (2) ≥ 8 centimeters but < 15 centimeters (3) ≥ 15 centimeters but < 30 centimeters (4) ≥ 30 centimeters but < 46 centimeters (5) ≥ 46 centimeters but < 61 centimeters					
Second Seat (21) Left (22) Middle (23) Right	(97) Catastrophic (98) Other enclosed area (specify)	(6) ≥ 61 centimeters (7) Catastrophic (9) Unknown					
Third Seat (31) Left (32) Middle (33) Right	(99) Unknown	DOMINANT CRUSH DIRECTION (1) Vertical (2) Longitudinal (3) Lateral (7) Catastrophic (9) Unknown					

ST	EERING	RIM/SPOKE DEFOR	RMATIO	N				
	(All Measurements Are in Centimeters)							
COMPARISON VALUE	_	DAMAGE VALUE	=	DEFORMATION				
	_		=					
	_		=					
	-1/6	O DEFOI	e ĀA	TION				
			=					
	•							

STEERING COLUMN	INSTRUMENT PANEL
87. Steering Column Type (1) Fixed column (2) Tilt column (3) Telescoping column (4) Tilt and telescoping column (8) Other column type (specify): (9) Unknown	92. Odometer Reading Unknown if Odometer kilometers has rolled over! Code to the nearest 1,000 kilometers (000) No odometer (001) Less than 1,500 kilometers (500) 499,500 kilometers or more (999) Unknown miles x 1.6093 = 52943 kilometers
88. Tilt Steering Column Adjustment (0) No tilt steering column (1) Full up (2) Between full up and center (3) Center (4) Between center and full down (5) Full down (9) Unknown	93. Instrument Panel Damage from Occupant Contact? (0) No (1) Yes (9) Unknown 94. Type of Knee Bolster Covering (0) No knee bolster
89. Telescoping Steering Column Adjustment (0) No telescoping steering column (1) Full back (2) Between full back and midpoint (3) Midpoint (4) Between midpoint and full forward (5) Full forward (9) Unknown	(1) Padded (2) Rigid plastic (8) Other (specify): (9) Unknown 95. Knee Bolsters Deformed from Occupant Contact? (0) No knee bolster (1) No deformation (2) Yes - deformation (9) Unknown
90. Steering Rim/Spoke Deformation Code actual measured deformation to the nearest centimeter (00) No steering rim deformation (01-14) Actual measured value in centimeters (15) 15 centimeters or more (98) Observed deformation cannot be measured (99) Unknown	96. Did Glove Compartment Door Open During Collision(s)? (0) No glove compartment door (1) No - door did not open (2) Yes - door opened (9) Unknown 97. Adaptive (Assistive) Driving Equipment
91. Location of Steering Rim/Spoke Deformation (00) No steering rim deformation Quarter Sections (01) Section A (02) Section B (03) Section C (04) Section D Half Sections (05) Upper half of rim/spoke (06) Lower half of rim/spoke (07) Left half of rim/spoke (08) Right half of rim/spoke (09) Complete steering wheel collapse (10) Undetermined location (99) Unknown	(0) No adaptive driving equipment (1) Adaptive driving equipment installed (Check all that apply.) [] Hand controls for braking/acceleration [] Steering control devices (attached to OEM steering wheel [] Steering knob attached to steering wheel [] Low effort power steering (unit or device) [] Replacement steering wheel (i.e., reduced diameter) [] Joy-stick steering controls [] Wheelchair tie-downs [] Modification to seat belts (specify): [] Additional or relocated switches (specify): [] Raised roof [] Wall-mounted head rest (used behind wheelchair) [] Other adaptive device (specify): (9) Unknown



Sketch windshield contact(s) and the damaged area(s) on the instrument panel outline (e.g., radio, glove compartment, damage to instrument panel structure.

Cross hatch contact points, draw spider webs or use other annotation as may be appropriate.

Annotate the contacted area with a letter (begin with A) and list on the Points of Occupant Contact page.

		POI	NTS OF OCC	UPANT CONTACT		
Contact	Interior Component Contacted	Occupant No. If Known	Body Region If Known	Supporting Physical E	vidence	Confidence Level of Contact Point
A						
В						
C						
	-					
<u>_</u>						
F			1			
G						
Н						
ı						
J						
K						
L						
М						
N						
		exclusion	side hardware or st A. (A1/A2)-pillar B-pillar r left pillar (specify): side window glass side window sill side window glass ding one or more of the wing: frame, window A. (A1/A2)-pillar, B-pillar, of side rail. r left side object cify): It side interior surface, ading hardware or est t side hardware or est t A. (A1/A2)-pillar.	(163) Other interior object (specify): AIR BAG (170) Air bag-driver side (175) Air bag compartment cover-driver side (180) Air bag-passenger side (185) Air bag compartment cover-passenger side (190) Other air bag (specify) (195) Other air bag compartment cover (specify) ROOF (201) Front header (202) Rear header (203) Roof left side rail (204) Roof right side rail (204) Roof right side rail (205) Floor or convertible top FLOOR (251) Floor (including toe pan) (252) Floor or console mounted transmission lever, including console (253) Parking brake handle (254) Foot controls including	CONFIDENCE LEVE POINT	age rack, ect (specify): VE) DRIVING I for ration roll devices DEM steering wheel diameter) string controls e-downs to seat belts, relocated ecify): I head rest wheel chair) re device
		(110) Othe	er right side object	(251) Floor (including toe pan) (252) Floor or console mounted transmission lever, including console (253) Parking brake handle	CONFIDENCE LEVE	L OF CONTACT

MANUAL RESTRAINTS

NOTES: Encode the applicable data for each seat position in the vehicle. The attribute for the variable may be found below Restraint systems should be assessed during the vehicle inspection then coded on the Occupant Assessment Form. If a Child safety seat is present, encode the data on the back of this page.

If the vehicle has automatic restraints available, encode the appropriate data on the back of the previous page.

	If the vehicle has automatic res		Center	Right
		Left	Center	night /
	Availability	4		4,
F	Evidence of usage	64		04
l	Used in this crash?	99		00
R S	Proper Use			0
Ť	Failure Modes			0
	Anchorage Adjustment			
	Availability	3	3	3
S	Evidence of usage	0/	0/	0/
Ĕ	Used in this crash?	00	00	00
MECOZD	Proper Use	0	0	0
20	Failure Modes	0	0	0
D	Anchorage Adjustment	0	0	6
	Availability			
0	Evidence of usage			
0 T	Used in this crash?			
H	Proper Use			
H E R	Failure Modes			
	Anchorage Adjustment			

Manual (Active) Belt System Availability

- (0) None available
- (1) Belt removed/destroyed
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt available type unknown

Integral Belt Partially Destroyed

- (6) Shoulder belt (lap belt destroyed/removed)
- (7) Lap belt (shoulder belt destroyed/removed)
- (8) Other belt (specify):
- (9) Unknown

Manual (Active) Belt System Use

- (00) None used, not available, or belt removed/destroyed
- (01) Inoperable (specify):
- (02) Shoulder belt
- (03) Lap belt
- (04)Lap and shoulder belt
- (05) Belt used - type unknown
- (80)Other belt used (specify):
- (12) Shoulder belt used with child safety
- Lap belt used with child safety seat (13)
- Lap and shoulder belt used with (14)child safety seat
- (15) Belt used with child safety seat type unknown
- (18) Other belt used with child safety seat (specify):
- (99) Unknown if belt used

Proper Use of Manual (Active) Belts

- None used or not available (0)
- (1) Belt used properly
- (2) Belt used properly with child safety seat

Belt Used Improperly

- Shoulder belt worn under arm (3)
- (4) Shoulder belt worn behind back or seat
- (5) Belt worn around more than one person
- (6) Lap belt worn on abdomen
- Lap beit or lap and shoulder belt (7) used improperly with child safety seat (specify):
- (8) Other improper use of manual belt system (specify):
- Unknown

Manual (Active) Belt Failure Modes During Accident

- (0) No manual belt used or not available
- No manual belt failure(s) (1)
- Torn webbing (stretched webbing (2) not included)
- (3) Broken buckle or latchplate
- Upper anchorage separated (4) (5)
- Other anchorage separated (specify):
- (6) Broken retractor
- Combination of above (specify): (7)
- (8) Other manual belt failure (specify):
- 191 Unknown

Shoulder Belt Upper Anchorage Adjustment

- No shoulder belt (0)
- No upper anchorage adjustment for (1) shoulder belt

Adjustable shoulder Belt Upper Anchorage

- (2) In full up position
- In mid position (3)
- (4)In full down position (5)
 - Position unknown
- Unknown if position has adjustable (9) upper anchorage adjustment

Mauone	Academ Sampling System St		
		AUTOMATIC RESTRAI	NTS
NOTE	S: Encode the data for each ap below. Restraint systems sl Assessment Form.	plicable front seat position. The hould be assessed during the ve AIR BAGS	e attribute for the variables may be found hicle inspection then coded on the Occupant
		Left Front	Right Front Other
F	Availability/Function	0	0
R R	Deployment	0	0
S	Failure	\circ	0
(0) (1) Non- (2) (3) (9) Are Th System (0) (1) (2)	Yes (specify):	Frontal Air Bag System Deployment (This Occupant Position) (0) Not equipped/not available (1) Deployed during accident (as a of impact) (2) Deployed inadvertently just pri accident (3) Deployed, accident sequence undetermined (4) Deployed as a result of a noncevent during accident sequence (e.g., fire, explosion, electrical (5) Unknown if deployed (9) Unknown	of impact) (2) Deployed inadvertently just prior to accident (3) Deployed, details unknown (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion,
(9)	Unknown	AUTOMATIC BELTS	
		Left	Right
	Availability/Function	0	0
F	Use	0	0
R	Туре	0	0
S	Proper Use	0	0
1	Failure Modes	0	0
Availat (0) (1) (2) (3) Non (4) (9) Autom (0) (1) (2)	atic (Passive) Belt System lity/Function Not equipped/not available 2 point automatic belts 3 point automatic belts Automatic belts - type unknown -functional Automatic belts destroyed or rendered inoperative Unknown atic (Passive) Belt System Use Not equipped/not available/destroyed or rendered inoperative Automatic belt in use Automatic belt in use (manually disconnected, motorized track inoperative) Automatic belt use unknown Unknown atic (Passive) Belt System Type	Proper Use of Automatic (Passive) B. System (0) Not equipped/not available/no (1) Automatic belt used properly (2) Automatic belt used properly child safety seat Automatic Belt Used Improperly (3) Automatic shoulder belt worn arm (4) Automatic shoulder belt worn back (5) Automatic belt worn around r than one person (6) Lap portion of automatic belt on abdomen (7) Automatic lap and shoulder be automatic shoulder belt used improperly with child safety seat (specification) (8) Other improper use of automatics	During Accident (0) Not equipped/not available/not in use (1) No automatic belt failure(s) with (2) Torn webbing (stretched webbing not included) (3) Broken buckle or latchplate (4) Upper anchorage separated (5) Other anchorage separated (specify): (6) Broken retractor (7) Combination of above (specify): nore (8) Other automatic belt failure (specify): worn (9) Unknown
(0) (1) (2)	Not equipped/not available Non-motorized system Motorized system Unknown	(specify):(9) Unknown	

FIRST SEAT FRONTAL AIR BAGS

NOTES: Encode the applicable data for the driver and first seat passenger in the vehicle. The attribute for the variable may be found below. Restraint systems should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

	Driver	Passenger
Two of six boo?	0	.0
Type of air bag? Flaps open at tear points?	0	0
Flaps damaged?	0	0
Air bag damaged?	00	00
Source of air bag damage	00	\sim
Air bag tethered?	6	h
Air bag have vent ports?	0	
Other occupant contact air bag?	0	0
Occupant wearing eyewear?	0	<u> </u>

Type of Air Bag

- (0) Not equipped/not available
- (1) Original manufacturer installed system
- (2) Retrofitted air bag
- (3) Replacement air bag
- (8) Unknown type of air bag
- (9) Unknown

Did Air Bag Module Cover Flap(s) Open At Designated Tear Points?

- (O) Not equipped/not available
- (1) No
- (2) Yes
- (3) Deployed, unknown if flap(s) opened at designated tear points
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

Were Air Bag. Module Cover Flap(s) Damaged?

- (0) Not equipped/not available
- (1) No
- (2) Yes (specify):
- (3) Deployed, unknown if air bag module cover flap(s) damaged
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

Was There Damage To The Air Bag?

- (00) Not equipped/not available
- (01) Not damaged

Yes - Air Bag Damage

- (02) Ruptured
- (03) Cut
- (04) Torn
- (05) Holed (06) Burned
- (07) Abraded
- (88) Other damage (specify):
- (95) Damaged, details unknown
- (96) Deployed, unknown if damaged
- (97) Not deployed
- (98) Unknown if deployed
- (99) Unknown

Source of Air Bag Damage

- (00) Not equipped/not available
- (01) Not damaged
- (02) Object worn by occupant, (specify):
- (03) Object carried by occupant, (specify):
- (04) Adaptive/assistive controls, (specify):
- (05) Fire in vehicle
- (06) Thermal burns
- (07) Rescue or emergency efforts
- (88) Other damage source (specify):
- (95) Damaged, unknown source
- (96) Deployed, unknown if damaged
- (97) Not deployed
- (98) Unknown if deployed
- (99) Unknown

Was The Air Bag Tethered?

- (0) Not equipped/not available
- (1) No
- (2) Yes (specify number of tether straps):
- (3) Deployed, unknown if tethered
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

Did The Air Bag Have Vent Ports?

- (O) Not equipped/not available
- (1) No
- (2) Yes (specify number of vent ports):
- (3) Deployed, unknown if vent ports
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

Was the Air Bag in this Occupant's Position Contacted by Another Occupant?

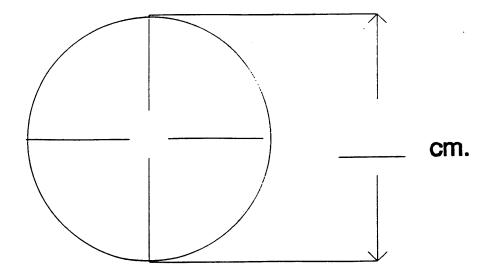
- (0) Not equipped/not available
- (1) No
- (2) Yes (specify):
- (3) Deployed, unknown if other occupant contact to air bag
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

Was This Occupant Wearing Eye-wear?

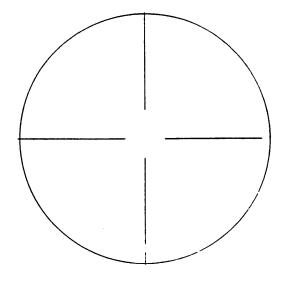
- (0) Not equipped/not available
- (1) No
- (2) Eyegiasses/sungiasses
- (3) Contact lenses
- (4) Deployed, unknown if eyewear worn
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

DRIVER AIR BAG DAMAGE AND CONTACT SKETCHES

1. SKETCH DAMAGE AND CONTACT EVIDENCE ON DRIVER AIR BAG (Front)



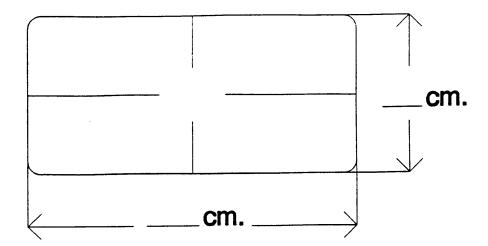
2. SKETCH DAMAGE AND CONTACT EVIDENCE ON DRIVER AIR BAG (Back)



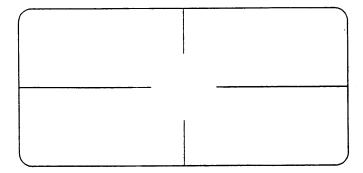
DRIVER AIR BAG S	KETCHES (Cont'd)
3. DRIVER AIR BAG MODULE COVER FLAP SIZE (DOUBLE) a. Upper Flap width (Wu) height (Hu) Wu Hu Hu Hu Hu Hu Hu Hu Hu Hu	
4. SKETCH OF OTHER TYPE OF AIR BAG MODULE FLAP AND SIZE .	5. SKETCH OF OTHER TYPE OF AIR BAG VENT PORTS
6. SKETCH LOCATION OF CIRCULAR AIR BAG VENT PORTS 11 12 1 10 2 9 3 8 4 7 6 5	

PASSENGER AIR BAG DAMAGE AND CONTACT SKETCHES

1. SKETCH DAMAGE AND CONTACT EVIDENCE ON PASSENGER AIR BAG (Front)



2. SKETCH DAMAGE AND CONTACT EVIDENCE ON PASSENGER AIR BAG (Back)



PASSENGER AIR BAG	SKETCHES (Cont'd)
3. PASSENGER AIR BAG MODULE COVER FLAP SIZE (SINGLE) a. Flap width (W) height (H) W	4. PASSENGER AIR BAG MODULE COVER FLAP SIZE (DOUBLE) a. Upper Flap width (Wu) height (Hu) H, H, W, W, W, W, H, H, H, H,
5. SKETCH OF OTHER TYPE OF AIR BAG MODULE FLAP AND SIZE	6. SKETCH OF OTHER TYPE OF AIR BAG VENT PORTS
7. SKETCH LOCATION OF RECTANGULAR AIR BAG VENT PORTS 10 11 12 1 2 9 3 8 7 6 5 4	

.

"OTHER" AIR BAG DAMAGE AND CONTACT SKETCHES					
1. SKETCH DAMAGE AND CONTACT EVIDENCE ON "OTHER" AIR BAG (Front)					
2. SKETCH DAMAGE AND CONTACT EVIDENCE ON "OTHER" AIR BAG (Back)					

	"OTHER" AIR BAG SKETCHES (Cont'd)						
3	3. SKETCH AIR BAG MODULE FLAP AND SIZE OR OPENING FOR AIRBAG						
4.	SKETCH AIR BAG VENT PORTS						

HEAD RESTRAINTS/SEAT EVALUATION

NOTES: Encode the applicable data for each seat position in the vehicle. The attribute for these variables may be found at the bottom of the page. Head restraint type/damage and seat type/performance should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

		Left	Center	Right
	Head Restraint Type/Damage	3		3
F	Seat Type	02		0 2
	Seat Performance	1		/
_	Seat Orientation			1
T [Seat Track Position	3		3
	Seat Back Incline Pre/Post Impact	23		23
	Head Restraint Type/Damage	0	0	0
	Seat Type	03	03	03
S E C	Seat Performance		/	1
0	Seat Orientation		/	/
N D	Seat Track Position	1	/	/
	Seat Back Incline Pre/Post Impact	01	01	0/
	Head Restraint Type/Damage			
т	Seat Type			
H	Seat Performance			
Ř	Seat Orientation			
D	Seat Track Position			
	Seat Back Incline Pre/Post Impact			
	Head Restraint Type/Damage			
	Seat Type			
H	Seat Performance			
E R	Seat Orientation			
	Seat Track Position			
	Seat Back Incline Pre/Post Impact			

DESCRIBE ANY INDICATION OF ABNORMAL OCCUPANT POSTURE (I.E., UNUSUAL OCCUPANT CONTACT PATTERN)

HEAD RESTRAINTS/SEAT EVALUATION

Head Restraint Type/Damage by Occupant at This Occupant Position Position)

- (0) No head restraints
- (1) Integral no damage(2) Integral damaged during accident
- (3) Adjustable no damage(4) Adjustable damaged during accident
- (5) Add-on no damage(6) Add-on damaged during accident
- Other Specify):
- (9) Unknown

Seat Type (this Occupant Position)

- (00) Occupant not seated or no seat
- (01) **Bucket**
- (02) Bucket with folding back
- (03) Bench
- (04)Bench with separate back cushions
- Bench with folding back(s) (05)
- (06)Split bench with separate back cushions
- (07) Split bench with folding back(s)
- (08) Pedestal (i.e., column supported)
- (09) Other seat type (specify):
- (10) Box mounted seat (i.e., van type)
- (99) Unknown

Seat Performance (this Occupant

- (0) Occupant not seated or no seat
- No seat performance failure(s)
- (2) Seat adjusters failed
- (3) Seat back folding locks or "seat back" failed (specify):
- Seat tracks/anchors failed
- (5) Deformed by impact of occupant
- (6) Deformed by passenger compartment intrusion (specify):
- (7) Combination of above (specify):
- (8) Other (specify):
- (9) Unknown

Seat Orientation (this Occupant Position)

- (0) Occupant not seated or no seat
- Forward facing seat
- (2) Rear facing seat
- (3) Side facing seat (inward)
- (4) Side facing seat (outward)
- (8) Other (specify):
- (9) Unknown

Seat Track Adjusted Position Prior To Impact

- (0) Occupant not seated or no seat
- (1) Non-adjustable seat track

Adjustable Seat Track

- (2) Seat at forward most track position
- (3) Seat between forward most and middle track positions
- Seat at middle track position
- (5) Seat between middle and rear most track positions
- (6) Seat at rear most track position
- (9) Unknown

Seat Back Incline Prior and Post impact

(OO) Occupant not seated or no seat

(01) Not adjustable

Upright prior to impact

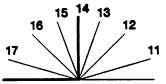
- (11) Moved to completely rearward position
- Moved to rearward midrange position
- (13)Moved to slightly rearward position
- Retained pre-impact position (14)
- Moved to slightly forward (15)position
- Moved to forward midrange (16)position
- Moved to completely forward (17)position

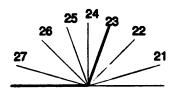
Slightly reclined prior to impact

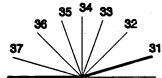
- (21) Moved to completely rearward position
- Moved to rearward midrange (22)position
- Retained pre-impact postion (23)
- (24) Moved to upright position
- (25)Moved to slightly forward position
- (26)Moved to forward midrange position
- Moved to completely forward (27) position

Completely reclined prior to impact

- (31) Retained pre-impact position
- Moved to rearward midrange (32)position
- (33)Moved to slightly rearward
- position
- (34) (35) Moved to upright position
- Moved to slightly forward position
- Moved to forward midrange (36)position
- Moved to completely forward position
- (99) Unknown







Coding diagrams for Seat Back Incline Position Prior and Post Impact

DESCRIBE ANY INDICATION OF ABNORMAL OCCUPANT POSTURE (I.E., UNUSUAL OCCUPANT CONTACT PATTERN)

the vehicle. Code the appropriate the vehicle. Code the appropriate the specific transfer in the vehicle. The vehicle is the vehicle of the vehicle of the vehicle of the vehicle. The vehicle of the vehicle of the vehicle of the vehicle of the vehicle.]	····						
Occupant Number								
Ejection			-					
(Note on Vehicle Interior Sketch) Ejection Area								
Ejection Medium								
Medium Status								
Ejection (1) Complete ejection (2) Partial ejection (3) Ejection, Unknown degree (9) Unknown Ejection Area (1) Windshield (2) Left front (3) Right front (4) Left rear (5) Right rear (6) Rear		Unknoon Me Door/ Nonfin	edium hatch/tailg xed roof s glazing	pecify):	Mo	9) Unknow	edium (specify n is (immediately structure	
NTRAPMENT No / 1 Ye	s []							
omponent(s):								

	CHILD SAFET	Y SEAT FI	ع۱	D ASSE	SSMENT			
Whe	en a child safety seat is present enter the occupant's number using the codes liste	occupant's nur	mb	er in the fir	st row and co	mplete the col nild safety sea	umn below t present.	
								
Occ	supant Number							
1.	Type of Child Safety Seat							
2.	Child Safety Seat Orientation							
3.	Child Safety Seat Harness Usage							
4.	Child Safety Seat							
5.	Shield Usage Child Safety Seat							
6.	Tether Usage Child Safety Seat	Specify	В	elow for E	ach Child Safe	ty Seat		
	Make/Model							
1.	Type of Child Safety Seat		4.	Child Saf	ety Seat Shiel	d Usage		
	(0) No child safety seat		5.	Child Saf	ety Seat Teth	er Usage		
	(1) Infant seat		•	Note: Op	tions Below A	re Used for V	ariables 3-5.	
	(2) Toddler seat (3) Convertible seat			(00) No	child safety so	eat		
	(4) Booster seat						. •	
	(7) Other type child safety seat (specification)	y):		Not Design (01) After	gned with Har er market harr	I with Harness/Shield/Tether arket harness/shield/tether		
	(8) Unknown child safety seat type			added, not used (O2) After market harness/shield/tether used (O3) Child safety seat used, but no after market harness/shield/tether added (O9) Unknown if harness/shield/tether added or used				
	(9) Unknown if child safety seat used							
2.	Child Safety Seat Orientation							
	(00) No child safety seat							
	Designed for Rear Facing for			auu	ed of deed			
	This Age/Weight			Designed	r			
	(O1) Rear facing				ness/shield/te			
	(02) Forward facing				ness/shield/te		ar usad	
	(08) Other orientation (specify):			(19) Unknown if harness/shield/tether use				
	(09) Unknown orientation	_		Unknow	n If Designed ' ness/shield/te	With Harness/	Shield/Tether	
	Designed for Forward Facing for This				ness/snieia/te ness/shield/te			
	Designed for Forward Facing for This Age/Weight					ess/shield/teth	er used	
	(11) Rear facing			•=				
	(12) Forward facing			(99) Unl	known if child	safety seat u	sed	
	(18) Other orientation (specify):		6	Child Sat	ion, Soot Mak	e/Model		
	(19) Unknown orientation	_	U.	. Child Safety Seat Make/Model (Specify make/model and occupant number)				
İ	Unknown Design or Orientation For Thi	s						
	Age/Weight, or Unknown Age/Weight							
l	(21) Rear facing							
	(22) Forward facing (28) Other orientation (specify):							
	120, Still Silvination (specify).							
	(29) Unknown orientation							
	(99) Unknown if child safety seat used	.						
l 3.	Child Safety Seat Harness Usage							

Appendix F:

NASS CDS INTERVIEW FORM:

CASE VEHICLE DRIVER

National Highway Traffic Safety Administration

INTERVIEW FORM (A)

NATIONAL ACCIDENT SAMPLING SYSTEM CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number / O Interviewee(s) Role or Name(s): DRIVER
2. Case Number - Stratum 9 5 1 7
3. Vehicle Number
Review all available information and interview questions prior to conducting interview(s) to ensure the
acquisition of all pertinent data.
If the driver was not the person interviewed, was an appointment made for a follow-up interview?
DRIVER'S DESCRIPTION OF ACCIDENT EVENTS
I was W/B on US in inside / Ane and
A couple seconds before impact my daughter
saw her come out and SAID "MOM!" Dulled
out and stopped in trant of me WE
hit
·
OCCUPANT'S DESCRIPTION OF ACCIDENT EVENTS
SPECIFIC QUESTIONS TO ASK INTERVIEWEE
Final Rest Dosition 5 12 ended up facue E
Final Rest Position 3 12 ended up facing E 11 MIDDLE. I stupped IN ORI LANT
(1) IV. De / Deploy
Daughter DOB - = = 27 Her DOB - = = 46
Daughter DOB - = = 27

	ACCIDENT DIAGRAM					
		The use of this diagram is optional. It may serve to aid in relating interviewee accident trajectory data (i.e., pre-impact to FRP orientations) to identifiable objects in the environment.				
	NORTH					
·						

CRASH DATA INFORMATION			
IF POSSIBLE OBTAIN THIS INFORMATION FROM THE DRIVER:			
SOURCE OF INFORMATION:	[] Driver [] Other occupant [] Relative/friend		
In which direction were you traveling?	[] North [] South [] East [West (Or where were they coming from or going to?)		
What lane were you in?	[] 1 [] 2 X 3 [] 4 [] Other Note: lane 1 is the right curb lane		
What was the condition of the roadway?	Dry [] Wet [] Snow [] Slush [] Ice [] Sand, dirt, oil [] Other (specify)		
What was the weather like? (Check all that apply)	No adverse conditions [] Rain [] Fog [] Sleet [] Hail [] Snow [] Other (specify)		
Was there any type of sign or signal present? (check all that apply)	Traffic control signal (includes flashing beacons, lane control signals, and green / amber / red signal) [] Stop sign [] Yield sign [] School zone sign Other regulatory sign (No "U" turn, left turn only, wrong way, etc.) specify: Marning sign (Winding road sign, stop ahead, intersection signs, etc.) specify: [] Miscellaneous control (including railroad controls) specify:		
If a traffic control device was present, was it functioning properly at the time of the crash?	[] None [] Unknown [] No traffic control device present [] Not functioning properly (includes defaced, badly worn, covered with snow, rotated etc.) specify: [A] Functioning properly [] Unknown		
Can you estimate your travel speed before the crash? (in mph)	[] Stopped [] 11-20 (1) 31-40 35 [] 51-60 [] 70+ [] 1-10 [] 21-30 [] 41-50 [] 61-70 [] Unknown		
Just before the crash, what were you doing or intending to do? (check all that apply)	Going straight [] Stopped [] Turning left [] Turning right [] Slowing [] Accelerating [] Backing [] Changing lanes to right [] Other (specify): [] Changing lanes to left		
Did vehicle lose control due to weather or mechanical problems?	No . [] Unknown [] Yes (describe)		
Did driver take avoidance actions? [☐ Yes (Check all that apply) → ☐ No ☐ Unknown	[] Braking with lock-up [] Accelerating []Other (specify): Description of the property of		
Where was vehicle at time of collision?	Original travel lane [] Different travel lane [] In intersection [] Off roadway to right [] Off roadway to left [] Other (specify):		
Can you estimate your travel speed at the time of collision? (in mph)	[] Stopped [] 11-20 X 31-40 [] 51-60 [] 70+ [] 1-10 [] 21-30 [] 41-50 [] 61-70 [] Unknown		
Describe all the impacts to the vehicle, including what the vehicle contacted) and how this vehicle moved to its stopped position, after the collision?			
What race does the driver consider themself?	[] White [] American Indian, Eskimo or Aleut, Asian or Pacific Islander [] Black [] Other (specify):		
Is the driver of Hispanic origin?	[X] No [] Yes [] Unknown		

VEHICLE INFORMATION				
	ROLLOVER DATA			
DID THIS VEHICLE ROLL OVER DURING THE CRASH? [] YES ASK THE FOLLOWING QUESTIONS [X] NO SKIP TO "FIRE DATA" BELOW [] UNKNOWN SKIP TO "FIRE DATA" BELOW				
Describe where the rollover began	[] On roadway [] On shoulder [] Unknown	[] On roadside or median		
What caused the vehicle to roll over?	[] Other vehicle (specify vehicle number) [] Contact to object (specify):_ [] Other cause (specify):_ [] Unknown			
Which direction did the vehicle roll?	[] Toward the right (passenger side) [] Toward the left (driver side) [] End-over-end [] Unknown			
Estimate the number of quarter turns (each side) or complete turns (4 quarter turns) the vehicle did	Number of quarter turns [] Unkn	own		
When the vehicle stopped rolling over, which side was in contact with the ground?	[] Left side [] Right side [] Unknown	[] Top [] Wheels		
+ ¥. /	FIRE DATA	State Control		
DID THIS VEHICLE EXPERIENCE A FIRE? [] YES ASK THE FOLLOWING QUESTIONS [] NO SKIP THIS SECTION [] UNKNOWN SKIP THIS SECTION				
Describe where the fire started, or where the smoke was first seen	[] Under the hood [] Behind the instrument panel [] In the passenger compartment	[] In the trunk/cargo area [] Under the vehicle [] From other involved vehicle [] Unknown		
Did the fire start with the electrical system?	[] No [] Yes (specify): [] Unknown			
Did the fire start with the fuel system?	[] No [] Yes (specify): [] Unknown			
ASK IF THE FIRE INVOLVED THE FUEL Which part of the fuel system may have been involved?	[*] Fuel tank . [*] Fuel lines . [*] Engine compartment (specify com [*] Unknown	ponent if known)		
Describe any additional rollover or	fire information here:			

PAGE 3

ADDITI	ONAL VEHICLE INFORMATION
IF THIS VEHICLE HAS NOT BEEN INSPECTED ASK THIS	Year: 19
QUESTION:	Make:
What is the year, make and model of your vehicle?	Model:
Was there any damage to the vehicle	[∕]•No [] Yes - describe:
that is not related to this crash?	[] Unknown
Did any of the doors or hatch come	No [] Yes - describe:
open during the crash?	[] Unknown
Did any of the windows break during	[] No ≥ Yes - describe: ω ≤
the crash?	[] Unknown
Were any windows open (O) or partially open (P) prior to the crash?	[] No [X] Yes* * "O" = open "P" = partially open
	[]WS [P]LF []RF []LR []RR []BL []Roof []Other
	[] Unknown
Did the glove compartment door come open during the crash?	[] No [] Yes - describe:
	₩ Unknown
	1 No 1/1 Yes - describe: GROCERIES
Was there any cargo in the vehicle at the time of the crash?	Approximate weight - <u>20-30</u> pounds 25 →11. 3 kg
	[] Unknown
Approximate mileage on the vehicle?	miles
Approximate missage on the temper.	W Unknown
Trous involves appears with Analysis of Company	Commission of the Commission o
Detail any notes, questions to ask directions to vehicle location here:	interviewee (i.e., rescue personnel damage to vehicle) or
directions to vehicle location here.	

Special Crash Invi	ESTIGATION ADDENDUM: DRIVER INFORMATION
Do you recall the type of development in the area of the crash?	Residential [] Industrial [] Agricultural [] Undeveloped [] School [] Other:
What were the weather conditions at the time of the crash?	Clear (no clouds, no precipitation) [] Cloudy (partially cloudy, no precipitation) [] Overcast (full cloud cover, no precipitation) [] Precipitating [] Unknown
What was the type of pre- cipitation?	[X] No precipitation [] Unknown [] Raining [] Freezing rain [] Sleeting [] Snowing [] Hailing
What was the condition of the road surface?	 [] Dry [] Wet [] Snowy, slushy [] Icy [] Other (e.g., sand, dirt, oil on surface, etc.) [] Unknown
How would you describe the amount of traffic at the time of the crash?	[] Heavy [Moderate [] Light [] No other traffic present
What is your occupation?	[] Professional [] Technical [] Government official [] Management [] Proprietors [] Sales [] Clerical [] Craftsman and foreman [] Service worker [X Student [] Farmers and farm-managers [] Farm labors and foreman [] Private household worker [] Housewife [] Other: Nursing Student
How long have you driven this vehicle?	Years: Months: > 6 mo, < 1 y <
How many miles do you think that you have driven it in the last 12-month period?	Miles: un K
How often do you drive this particular roadway?	[] Daily [] Twice weekly [] Once weekly [] Twice monthly [] Once monthly [X] Very infrequently [] First time on road MY 2 ND TIME ENERGY
Where were you coming from just prior to the crash?	[] Home [] Work [] School [] Shopping [] Social/recreational [] Restaurant [] Personal business [] Other:
Where were you intending to go when the crash occurred?	[] Home [] Work [] School [] Shopping Neces [] Social/recreational [] Restaurant [] Personal business [X] Other:

OCCUPANT DATA QUESTIONS			
How many people were in your vehicle at the time of the crash?			
, , , , , , , , , , , , , , , , , , , ,	DRIVER	OCCUPANT # 🔏	OCCUPANT # 3
Where was this person sitting in the vehicle?			
Front Left (FL) Second Left (2L) Front Middle (FM) Second Middle (2M) Front Right (FR) Second Right (2R)	FRONT LEFT	FR	22
Third Left (3L) Other (SPECIFY in block) Third Middle (3M) Third Right (3R)			
What is the Sex, Height, Weight, and Age of each occupant?	[] M [X] F - Not pregnant [] F - Pregnant - # of months [] F - Unk. if pregnant HEIGHT: 54 WEIGHT: 150 AGE: 44	[] M [X] F - Not pregnant [] F - Pregnant - # of months [] F - Unk. if pregnant HEIGHT: 56 WEIGHT: 170 AGE: 26	F - Not pregnant F - Pregnant - # of months F - Unk. if pregnant HEIGHT: 52 WEIGHT: 130 AGE: 79
Describe how occupant was seated A) Kneeling or standing on seat B) Lying on or across seat C) Kneeling, standing or sitting in front of seat D) Sitting sideways, turned to side or back E) Sitting on console F) Lying back in reclined position G) Other (specify) H Unknown	[] Leaning to left [] Leaning to right [X] Sitting upright [] Unknown Indicate all letters that apply and describe if other than above	[] Leaning to left [] Leaning to right [] Sitting upright [] Unknown Indicate all letters that apply and describe if other than above	[] Leaning to left [] Leaning to right [] Sitting upright [] Unknown Indicate all letters that apply and describe if other than above
Describe feet and hands/arms location just prior to impact (indicate all that apply) FEET A) On floor or foot controls B) One or both on dash C) One or both on seat D) Other (specify) E) Unknown HANDS / ARMS F) Both hands on steering wheel G) One on wheel, other hand resting or adjusting a control (specify hand on wheel and control involved) H) Dialing a cellular phone (specify location and type of phone) I) Holding a cellular phone (specify location and type of phone) J) Bracing with one or both hands K) On lap L) One or both out of window (specify) M) Other (specify) N) Unknown	Indicate all letters that apply and further describe as needed A CONTROL OF THE	Indicate all letters that apply and further describe as needed BRACED ANDAS Feet	Indicate all letters that apply and further describe as needed By the second of the s
Describe any additional information here	inded up or	(R) 51.04	

OCCUPANT DATA CONTINUED ON NEXT PAGE

OCCUPANT DATA QUESTIONS (continued)				
	DRIVER	OCCUPANT # 🙎	OCCUPANT # 3	
Was your / their back up against the seat back?	[] No (describe) [] Yes [] Unknown	[X] No (describe) [] Yes [] Unknown BRACING	[] No (describe) [] Yes [X] Unknown MAY be BRACING	
Does this seat position have an adjustable seat track, if so where was the seat located prior to impact?	[] Not adjustable [] Seat all the way forward	[] Not adjustable [] Seat all the way forward [] Between forward and middle [] At middle position Between middle and rear position [] Seat all the way rearward [] Unknown	Not adjustable [] Seat all the way forward [] Between forward and middle [] At middle position [] Between middle and rear position [] Seat all the way rearward [] Unknown	
Does this seat position have an adjustable seat back, if so where was the seat back located prior to impact?	[] Not adjustable [] Completely upright X Slightly reclined [] Completely reclined	[] Not adjustable [] Completely upright [X] Slightly reclined [] Completely reclined		
If this seat position has an adjustable seat back, where was the seat back located after impact?	[] Not adjustable [] Did not move (retained original position) [] Completely reclined [] Slightly reclined [] Completely upright [] Slightly forward of upright [] Completely forward [] Unknown	Not adjustable Did not move (retained original position) Completely reclined Slightly reclined Slightly reclined Slightly forward of upright Completely forward Completely forward Unknown	Not adjustable I Did not move (retained original position) I Completely reclined I Slightly reclined I Completely upright I Slightly forward of upright I Completely forward I Unknown	
Did this vehicle have a cellular phone in it during the crash? [] No [] Yes - describe type:				
[] Talking or listening [] Dialing a cellular p [] Adjusting climate [] Admisting radio, C [] Using other device [] Sleepy / asleep (s	control (specify): D or cassatte player (specify or object in vehicle (specify specify): side person, object, or event (specify):	v): v): v):		
Describe any additions	al information here:			

RES	TRAINT INFORMAT	TION	
	DRIVER	OCCUPANT # 👱	OCCUPANT # 3
Describe the seat belt available for the seat position NOTE: If a belt is not available for a seat position — describe if removed or not functional.	[] Unknown [] Lap belt [] Shoulder belt [] Lap & Shoulder [] Not available * * Describe:	[] Unknown [] Lap belt [] Shoulder belt [] Lap & Shoulder [] Not available * * Describe:	[] Unknown [] Lap belt [] Shoulder belt [] Lap & Shoulder [] Not available * * Describe:
	[] Unknown [X] No [] Yes * * If "Yes", were they working properly? [] Yes [] No (describe):	[] Unknown [X] No [] Yes * * If "Yes", were they working properly? [] Yes [] No (describe):	[] Unknown [] No [] Yes * * If "Yes", were they working properly? [] Yes [] No (describe):
	[] Unknown [X] No [] Yes * * If "Yes", does it cross: Chest Lap Both	[] Unknown [◄] No [] Yes * * If "Yes", does it cross: Chest Lap Both	[] Unknown [] No [] Yes * * If "Yes", does it cross: Chest Lap Both
Were you [and other occupant(s)] wearing a seat belt during the accident?	[] No [] Yes [] Unknown	No I Yes I Unknown	☑ No] Yes] Unknown
SKIP THE FOLLOWI	NG IF NO SEA	T BELT WAS I	NORN
		Figure 100 Figure 100	
Describe any breaks, tears, or failures to	any of the seat belts	:	

EJECTION, ENT	RAPMENT, MOBILITY	Y INFORMATION	
	DRIVER	OCCUPANT # &	OCCUPANT # 3
Was any part of your body thrown outside the vehicle during the crash?	No Yes * Unknown * If "Yes" - what part(s) were ejected, and what area of the vehicle was involved.	No No No No No No No No No No No No No N	No Yes * Unknown If "Yes" - what part(s) were ejected, and what area of the vehicle was involved.
Was anyone pinned in the vehicle?	No Yes	No Yes	No Yes
How did you [and other occupant(s)] exit the vehicle?	[] Fatal before removed [] Removed while unconscious or disoriented [] Removed due to injuries [] Exited with some assistance [X Exited under own power [] Fully ejected [] Unknown	[] Fatal before removed [] Removed while unconscious or disoriented [] Removed due to injuries [X Exited with some assistance [] Exited under own power [] Fully ejected [] Unknown	[] Fatal before removed [] Removed while unconscious or disoriented [] Removed due to injuries [] Exited with some assistance Exited under own power [] Fully ejected [] Unknown
Further describe any ejection, entrapment found my daughtens sun 9/A My Daughter h	at, or mobility informations of the second s	tion here:	CAR on 9Re

AIR BAG INFORMATION				
WAS THIS VEHICLE EVER EQUIPPED WITH AN AIR BAG?				
[X] YES (IF "YES" COMPLETE THIS SECTION)				
[] NO [] UNKNOWN	(IF "NO" OR "U	UNKNOWN" SKIP TH	IS SECTION)	
·	DRIVER SIDE FRONTAL	PASSENGER SIDE FRONTAL OCCUPANT #	"OTHER" AIR BAG SPECIFY:	
Had this vehicle been in any previous crashes? [X] NO [] YES - continue to right [] UNKNOWN - go to box below	[] Prior crash without deployment [] One prior crash with deployment [] > 1, with at least one deployment [] Previous accident(s) unknown if deployed	[] Prior crash without deployment [] One prior crash with deployment [] >1, with at least one deployment [] Previous accident(s) unknown if deployed	[] Prior crash without deployment [] One prior crash with deployment [] > 1, with at least one deployment [] Previous accident(s) unknown if deployed	
	IF PRIOR DEPLOYMENT () CHECK IF NOT REINSTALLED	IF PRIOR DEPLOYMENT () CHECK IF NOT REINSTALLED	IF PRIOR DEPLOYMENT CHECK IF NOT REINSTALLED	
Type of air bag?	Original equipment I Retrofitted I Replacement I Unknown	Original equipment [] Retrofitted [] Replacement [] Unknown	[] Original equipment [] Retrofitted [] Replacement [] Unknown	
Had any prior maintenance / service been performed on the air bag system?	No [] Unknown [] Yes - Specify:	Y No [] Unknown [] Yes - Specify:	[] No []Unknown [] Yes - Specify:	
Did the air bag inflate during this crash?	Yes []Unknown [] No If "NO" was the wiring disconnected prior to the crash?	Tyes []Unknown y Deployed If "NO" was the wiring disconnected prior to the crash?	[] Yes []Unknown [] No If "NO" was the wiring disconnected prior to the crash?	
Was the person in this position wearing any type of eye-wear? (Eyeglasses, sunglasses, contact lenses)	[] Yes [] No [] Unk [] No [] Unknown [] Yes - Specify: SUNGLASSS	[] Yes [] No [] Unk [] No [] Unknown [X] Yes - Specify: SUNY ASSO	[] Yes [] No [] Unk [] No [] Unknown [] Yes - Specify:	
Was the air bag in this position contacted by another occupant?	Mo [] Unknown [] Yes - Specify:	No [] Unknown [] Yes - Specify:	[] No [] Unknown [] Yes - Specify:	
Describe any additional information here:				

	DRIVER	OCCUPANT #	N" SKIP THIS SECTION) OCCUPANT #
lanufacturer and model of ne safety seat?			
ype of safety seat?		[] Infant [] Toddler [] Convertible [] Booster [] Integral [] Other Specify:	[] Infant [] Toddler [] Convertible [] Booster [] Integral [] Other Specify:
<u></u>		[] Unknown	[] Unknown
Vhat direction was it facing rior to the crash?		[] Front [] Rearward [] Unknown	[] Front [] Rearward [] Unknown
Vas a seat belt used to old the seat in place?		[] No [] Yes [] Unknown	[] No [] Yes [] Unknown
low was the seat belt ecured to the child seat?		 [] Looped through designated rear framing studs [] Looped through arm rest slots [] Belt across safety shield [] Looped through rear frame / outside the designated framing struts [] Other (specify): [] Unknown 	Looped through designated rear framing studs Looped through arm rest slots Belt across safety shield Looped through rear frame outside the designated framing struts Other (specify): Unknown
Vhat was the safety seat quipped with at time of urchase?		[] Harness [] Shield [] Tether [] Unknown	[] Harness [] Shield [] Tether [] Unknown
Vere any of these added fter they owned the safety eat?		[] Harness [] Shield [] Tether [] None [] Unknown	[] Harness [] Shield [] Tether [] None [] Unknown
Describe any additiona	information	on here:	

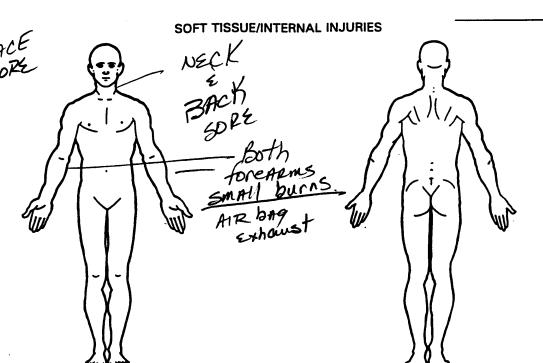
INJURY INFORMATION				
	. DRIVER	OCCUPANT # 2	OCCUPANT # 3	
Were you (or any other occupants) injured? • If "YES" go to manikin page and record injuries in detail	[] No [X] Yes [] Unknown	[] No Yes [] Unknown	No The second of the second of	
► If "NO" ask next questions				
Did you (or any other occupants) receive any of the following: (If any injuries are checked, go to the manikin page and record location, lesion, and source)	[] Cuts [] Abrasions [] Bruises [] Broken bones [] Head, skull, brain [] Internal injury [] Sprains, strains [] Other (specify): [] Durns SORCONESS	[] Cuts [] Abrasions [] Bruises [] Broken bones [] Head, skull, brain [] Internal injury [] Sprains, strains [] Other (specify):	[] Cuts [] Abrasions [] Bruises [] Broken bones [] Head, skull, brain [] Internal injury [] Sprains, strains [] Other (specify):	
			Fed SEP (Mally Stayona (S	
Did you (or any other occupants) receive any medical treatment? (check all that apply)	[] Hospital [] Medical clinic [] Paramedics at scene [X] Doctor's office [] Treated by self [] Unknown	Hospital [] Medical clinic [] Paramedics at scene [] Doctor's office [] Treated by self [] Unknown	[] Hospital [] Medical clinic [] Paramedics at scene [] Doctor's office [] Treated by self [] Unknown	
Were you (or any other occupants) hospitalized?	No Yes - number of days Unknown	[X] No [] Yes - number of days [] Unknown	No Yes - number of days Unknown	
Were you (or any other occupants) treated and released from the emergency room?	[] No [] Yes [] Unknown	[] No	[] No [] Yes [] Unknown	
Name of medical treatment facility?	D2 /	Hosp		
Have you (or any other occupants) received any follow-up treatment?	No Yes - describe:	[] No [K] Yes - describe: GOING FOA a CAT SCAN JUST to V not; [] Unknown ye	No [] Yes - describe: ' [] Unknown	
Have you (or any other occupants) lost any days from work or school (college) due to the crash?	No No Not working prior to crash Yes - number of days Unknown	[] No [] Not working prior to crash [] Yes - number of days [] Unknown	No Not working prior to crash Yes - number of days Unknown	
IF REQUIRED: Will you sign a medical release?	[] No [] Yes* [] Unknown	[] No [] Yes* [] Unknown	[] No [] Yes* [] Unknown	
* If not an in-person interview, make appointment to have release signed	DATE: TIME: PLACE:	DATE: TIME: PLACE:	DATE: TIME: PLACE:	

Case Number-Stratum 9517

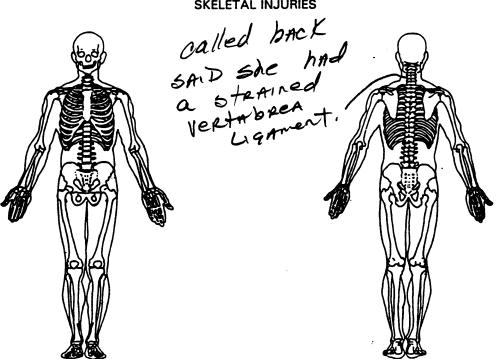
Vehicle Number 0 / Occupant Number 0 /

INJURY DATA FROM INTERVIEWEE(S)

Indicate the Location, Lesion, Detail, and Source of all injuries. Specify interviewee(s):



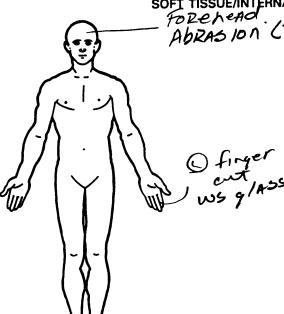
SKELETAL INJURIES

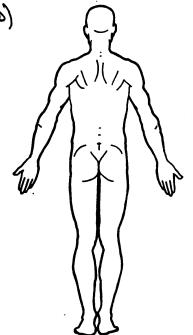


Case Number – Stratum 9519 Vehicle Number 01 Occupant Number 22

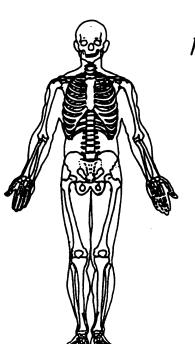
INJURY DATA FROM INTERVIEWEE(S)

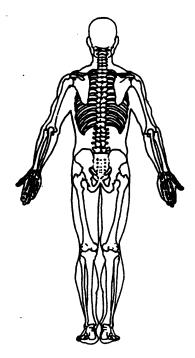
Indicate the Location, Lesion, Detail, and Source of all injuries. Specify interviewee(s):

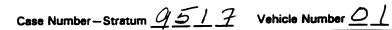




SKELETAL INJURIES



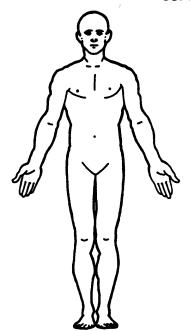




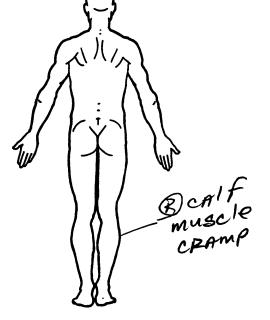
Occupant Number <u>0</u>3

Indicate the Location, Lesion, Detail, and Source of all injuries. Specify interviewee(s): __

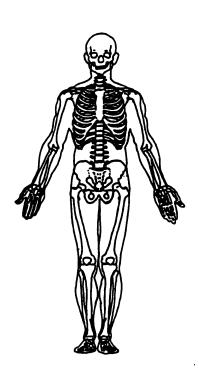
SOFT TISSUE/INTERNAL INJURIES

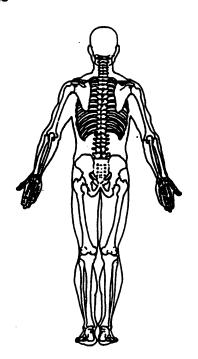


50RE



SKELETAL INJURIES





Appendix G:

NASS CDS INTERVIEW FORM:

VEHICLE #2 DRIVER

National Highway Traffic Safety Administration

INTERVIEW FORM (A)

NATIONAL ACCIDENT SAMPLING SYSTEM CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number 7 0	Interviewee(s) Role or Name(s): DRIVER of this VEh
2. Case Number - Stratum 99577	
Review all available information and interview q acquisition of all pertinent data.	uestions prior to conducting interview(s) to ensure the
	as an appointment made for a follow-up interview?
DRIVER'S DESCRI	PTION OF ACCIDENT EVENTS
I was crossing A truck was tured blocking my vie saw car then	y intersection I stoppe rning B down my street w. I pulled out accellerated
OCCUPANT'S DESC	CRIPTION OF ACCIDENT EVENTS
SPECIEIC OLIEST	IONS TO ASK INTERVIEWEE
How did your cap	
How did your car	acing EAST. In MEDIAN.

The use of this diagram is optional. It may serve to aid in relating interviewee accident trajectory data (i.e., pre-impact to FRP orientations) to identifiable objects in the environment. NORTH	ACCID	ACCIDENT DIAGRAM	
			The use of this diagram is optional. It may serve to aid in relating interviewee accident trajectory data (i.e., pre-impact to FRP orientations) to identifiable objects in the
		NORTH	

. •

CRASH DATA INFORMATION		
IF POSSIBLE OB	TAIN THIS INFORMATION FROM THE DRIVER:	
SOURCE OF INFORMATION:	[] Driver [] Other occupant [] Relative/friend	
In which direction were you traveling?	[] North South [] East [] West (Or where were they coming from or going to?)	
What lane were you in?	[] 2 [] 3 [] 4 [] Other Note: lane 1 is the right curb lane	
What was the condition of the roadway?	Dry [] Wet [] Snow [] Slush [] Ice [] Sand, dirt, oil [] Other (specify)	
What was the weather like? (Check all that apply)	No adverse conditions [] Rain [] Fog [] Sleet [] Hail [] Snow [] Other (specify)	
Was there any type of sign or signal present? (check all that apply)	Traffic control signal (includes flashing beacons, lane control signals, and green / amber / red signal) Stop sign [] Yield sign [] School zone sign [] Other regulatory sign (No "U" turn, left turn only, wrong way, etc.) specify: [] Warning sign (Winding road sign, stop shead, intersection signs, etc.) specify: [] Miscellaneous control (including railroad controls) specify: [] None [] Unknown	
If a traffic control device was present, was it functioning properly at the time of the crash?	 No traffic control device present Not functioning properly (includes defaced, badly worn, covered with snow, rotated etc.) specify: Functioning properly Unknown 	
Can you estimate your travel speed before the crash? (in mph)	[] Stopped	
Just before the crash, what were you doing or intending to do? (check all that apply)	Going straight [] Stopped [] Turning left [] Turning right [] Slowing [] Accelerating [] Backing [] Changing lanes to right [] Other (specify): [] Changing lanes to left	
Did vehicle lose control due to weather or mechanical problems?	No . [] Unknown [] Yes (describe)	
Did driver take avoidance actions? [X] Yes (Check all that apply) → [] No [] Unknown	[] Braking with lock-up [] Braking without lock-up [] Releasing brakes [] Steering left [] Steering right	
Where was vehicle at time of collision?	[] Original travel lane	
Can you estimate your travel speed at the time of collision? (in mph)	[] Stopped DX 11-20 [] 31-40 [] 51-60 [] 70+ [] 1-10 [] 21-30 [] 41-50 [] 61-70 [] Unknown	
Describe all the impacts to the vehicle, including what the vehicle contacted) and how this vehicle moved to its stopped position, after the collision?		
What race does the driver consider themself?	[X] White [] American Indian, Eskimo or Aleut, Asian or Pacific Islander [] Black [] Other (specify):	
Is the driver of Hispanic origin?	No [] Yes [] Unknown	

	VEHICLE INFORMATION	
	ROLLOVER DATA	
DID THIS VEHICLE ROLL OVER DU [] YES ASK THE FOLLOW [] NO SKIP TO "FIRE DA [] UNKNOWN SKIP TO "	WING QUESTIONS .TA" BELOW	
Describe where the rollover began	[] On roadway	[] On roadside or median
What caused the vehicle to roll over?	[] Other vehicle (specify vehicle number [] Contact to object (specify): [] Other cause (specify): [] Unknown	
Which direction did the vehicle roll?	[] Toward the right (passenger side) [] Toward the left (driver side) [] End-over-end [] Unknown	
Estimate the number of quarter turns (each side) or complete turns (4 quarter turns) the vehicle did	Number of quarter turns [] Unk Number of complete turns	nown
When the vehicle stopped rolling over, which side was in contact with the ground?	[] Left side [] Right side [] Unknown	[] Top [] Wheels
+ 3 /	FIRE DATA	
DID THIS VEHICLE EXPERIENCE A [] YES ASK THE F [] NO SKIP THIS S [] UNKNOWN SKI	OLLOWING QUESTIONS ECTION	
Describe where the fire started, or where the smoke was first seen	[] Under the hood [] Behind the instrument panel [] In the passenger compartment	[] In the trunk/cargo area [] Under the vehicle [] From other involved vehicle [] Unknown
Did the fire start with the electrical system?	[] No [] Yes (specify): [] Unknown	
Did the fire start with the fuel system?	[] No [] Yes (specify): [] Unknown	
ASK IF THE FIRE INVOLVED THE FUEL SYSTEM - 19 Which part of the fuel system may have been involved?	[*] Fuel lines *** [*] Engine compartment (specify con	nponent if known)
Describe any additional rollover or	fire information here:	

ADDIT	IONAL VEHICLE INFORMATION
IF THIS VEHICLE HAS NOT BEEN INSPECTED ASK THIS QUESTION:	Year: 19
What is the year, make and model of your vehicle?	Model:
Was there any damage to the vehicle that is not related to this crash?	No [] Yes - describe: [] Unknown
Did any of the doors or hatch come open during the crash?	Yes - describe:
Did any of the windows break during the crash?	[] Unknown DR DOOF
Were any windows open (O) or partially open (P) prior to the crash?	[] No [] Yes* * "O" = open "P" = partially open [] WS [] LF [] RF [] LR [] RR [] BL [] Roof [] Other [] Unknown
Did the glove compartment door come open during the crash?	No [Yes - describe:
Was there any cargo in the vehicle at the time of the crash?	[] No tx Yes - describe: Approximate weight - 15 pounds → 6,8 kg [] Unknown Book BAG
Approximate mileage on the vehicle?	miles [X Unknown
Detail any notes, questions to ask directions to vehicle location here:	interviewee (i.e., rescue personnel damage to vehicle) or

Special Crash Invi	STIGATION ADDENDUM: DRIVER INFORMATION
Do you recall the type of development in the area of the crash?	[] Residential [] Commercial [] Industrial [] Agricultural [] Undeveloped [] School [] Other:
What were the weather conditions at the time of the crash?	Clear (no clouds, no precipitation) Cloudy (partially cloudy, no precipitation) Overcast (full cloud cover, no precipitation) Drecipitating Unknown
What was the type of precipitation?	No precipitation [] Unknown [] Raining [] Freezing rain [] Sleeting [] Snowing [] Hailing
What was the condition of the road surface?	Dry [] Wet [] Snowy, slushy [] Icy [] Other (e.g., sand, dirt, oil on surface, etc.) [] Unknown
How would you describe the amount of traffic at the time of the crash?	[] Heavy [] Moderate [] Light [] No other traffic present
What is your occupation?	[] Professional [] Technical [] Government official [] Management [] Proprietors [] Sales [] Clerical [] Craftsman and foreman [] Service worker [] Student [] Farmers and farm-managers [] Farm labors and foreman [] Private household worker [] Housewife [] Other:
How long have you driven this vehicle?	Years: Months:
How many miles do you think that you have driven it in the last 12-month period?	Miles: 1000
How often do you drive this particular roadway?	Daily [] Twice weekly [] Once weekly [] Twice monthly [] Once monthly [] Very infrequently [] First time on road
Where were you coming from just prior to the crash?	Home [] Work [] School [] Shopping [] Social/recreational [] Restaurant [] Personal business [] Other:
Where were you intending to go when the crash occurred?	[] Home [] Work [] School

į	DRIVER	OCCUPANT #	OCCUPANT #
Where was this person sitting in the vehicle?			
Front Left (FL) Second Left (2L) Front Middle (FM) Second Middle (2M) Front Right (FR) Second Right (2R)	FRONT LEFT		
Third Left (3L) Other (SPECIFY in block) Third Middle (3M) Third Right (3R)			
What is the Sex, Height, Weight, and Age of each occupant?	[] M [] F - Not pregnant [] F - Pregnant - # of months [] F - Unk. if pregnant HEIGHT: 53"	[] M [] F - Not pregnant [] F - Pregnant - # of months [] F - Unk. if pregnant HEIGHT:	[] M [] F - Not pregnant [] F - Pregnant - # of
	WEIGHT: 115	WEIGHT:	WEIGHT:
	[] Leaning to left [] Leaning to right [] Sitting upright [] Unknown Indicate all letters that apply and describe if other than above	[] Leaning to left [] Leaning to right [] Sitting upright [] Unknown Indicate all letters that apply and describe if other than above	[] Leaning to left [] Leaning to right [] Sitting upright [] Unknown Indicate all letters that apply and describe if other than above
G) Other (specify) H Unknown			·
Describe feet and hands/arms location just prior to impact (indicate all that apply)	Indicate all letters that apply and further describe as needed	Indicate all letters that apply and further describe as needed	Indicate all letters that apply and further describe as needed
FEET A) On floor or foot controls B) One or both on dash C) One or both on seat D) Other (specify) E) Unknown	longas Ionfloor		
HANDS / ARMS F) Both hands on steering wheel G) One on wheel, other hand resting or adjusting a control (specify hand on wheel and control involved)	F		
Dialing a cellular phone (specify location and type of phone) Holding a cellular phone (specify location and type of phone)			
J) Bracing with one or both hands K) On lap L) One or both out of window (specify)			

OCCUPANT DATA CONTINUED ON NEXT PAGE

	DRIVER	OCCUPANT #	OCCUPANT #
Was your / their back up against the seat back?	No (describe) [] Yes [] Unknown	[] No (describe) [] Yes [] Unknown	[] No (describe) [] Yes [] Unknown
Does this seat position have an adjustable seat track, if so where was the seat located prior to mpact?	[] Not adjustable [] Seat all the way forward Between forward and middle [] At middle position [] Between middle and rear position [] Seat all the way rearward [] Unknown	[] Not adjustable [] Seat all the way forward [] Between forward and middle [] At middle position [] Between middle and rear position [] Seat all the way rearward [] Unknown	[] Not adjustable [] Seat all the way forward [] Between forward and middle [] At middle position [] Between middle and rear position [] Seat all the way rearward [] Unknown
Does this seat position have an adjustable seat back, if so where was the seat back located prior to impact?	[] Not adjustable Completely upright [] Slightly reclined [] Completely reclined	[] Not adjustable [] Completely upright [] Slightly reclined [] Completely reclined	[] Not adjustable [] Completely upright [] Slightly reclined [] Completely reclined
If this seat position has an adjustable seat <i>back,</i> where was the seat <i>back</i> loc∈ted after impact?	Not adjustable [] Did not move (retained original position) [] Completely reclined [] Slightly reclined [] Completely upright [] Slightly forward of upright [] Completely forward [] Unknown	[] Not adjustable [] Did not move (retained original position) [] Completely reclined [] Slightly reclined [] Completely upright [] Slightly forward of upright [] Completely forward [] Unknown	[] Not adjustable [] Did not move (retained original position) [] Completely reclined [] Slightly reclined [] Completely upright [] Siightly forward of uprigh [] Completely forward [] Unknown
No Yes - describe type: Unknown (Note to res			•
[] Talking to or listen [] Was there a movin [] Talking or listening [] Dialing a cellular p [] Adjusting climate of the color of	ning to another occupant (speng object in vehicle (specify); on a cellular phone (specify); control (specify); D or cassatte player (specify); or object in vehicle (specify); ide person, object, or event (specify);	: v): v):	

DRIVER	OCCUPANT #	OCCUPANT #
[] Unknown [] Lap belt [] Shoulder belt Lap & Shoulder [] Not available *	[] Unknown [] Lap belt [] Shoulder belt [] Lap & Shoulder [] Not available * * Describe:	[] Unknown [] Lap belt [] Shoulder belt [] Lap & Shoulder [] Not available * * Describe:
[]/Unknown [X No Yes *	[] Unknown [] No [] Yes *	[] Unknown [] No [] Yes *
* If "Yes", were they working properly? [] Yes [] No (describe):	working properly? [] Yes [] No (describe):	* If "Yes", were they working properly? [] Yes [] No (describe):
" If "Yes", does it cross: Chest Lap Both	[] Unknown [] No [] Yes * * If "Yes", does it cross: Chest Lap Both	[] Unknown [] No [] Yes * * If "Yes", does it cross: Chest Lap Both
[] No Yes [] Unknown	[] No [] Yes [] Unknown	[] No [] Yes [] Unknown
VG IF NO SEA	T BELT WAS V	VORN
	[] Unknown [] Lap belt [] Shoulder belt [] Lap & Shoulder [] Not available *	[] Unknown [] Lap belt [] Shoulder belt [] Lap & Shoulder [] Not available * Describe: [] Unknown [] No [] Yes * If "Yes", were they working properly? [] Yes [] No (describe): [] Unknown [] No [] Yes [] No (describe): [] Unknown [] No [] Yes * If "Yes", does it cross:

EJECTION, ENTRAPMENT, MOBILITY INFORMATION					
DRIVER OCCUPANT # OCCUPANT #					
Was any part of your body thrown outside the vehicle during the crash?	No Yes * Unknown If "Yes" - what part(s) were ejected, and what area of the vehicle was involved.	[] No [] Yes * [] Unknown * If "Yes" - what part(s) were ejected, and what area of the vehicle was involved.	[] No [] Yes * [] Unknown * If "Yes" - what part(s) were ejected, and what area of the vehicle was involved.		
Was anyone pinned in the vehicle?	No Yes	[] No [] Yes physically pinned jammed doors fire, etc. [] Unknown Detail any entrapment	[] No [] Yesphysically pinnedjammed doorsfire, etc. [] Unknown Detail any entrapment		
How did you [and other occupant(s)] exit the vehicle?	[] Fatal before removed [] Removed while unconscious or disoriented [] Removed due to injuries [] Exited with some assistance Exited under own power [] Fully ejected [] Unknown	[] Fatal before removed [] Removed while unconscious or disoriented [] Removed due to injuries [] Exited with some assistance [] Exited under own power [] Fully ejected [] Unknown	[] Fatal before removed [] Removed while unconscious or disoriented [] Removed due to injuries [] Exited with some assistance [] Exited under own power [] Fully ejected [] Unknown		
Further describe any ejection, entrapmen					

AIR BAG INFORMATION				
WAS THIS VEHICLE EVER EQUIPPED WITH AN AIR BAG? [] YES (IF "YES" COMPLETE THIS SECTION)				
[X] NO [] UNKNOWN	(IF "NO" OR "	UNKNOWN" SKIP TH	IS SECTION)	
	DRIVER SIDE FRONTAL	PASSENGER SIDE FRONTAL OCCUPANT #	"OTHER" AIR BAG SPECIFY: OCCUPANT #	
Had this vehicle been in any previous crashes? [] NO [] YES - continue to right [] UNKNOWN - go to box below	[] Prior crash without deployment [] One prior crash with deployment [] > 1, with at least one deployment [] Previous accident(s) unknown if deployed	[] Prior crash without deployment [] One prior crash with deployment [] >1, with at least one deployment [] Previous accident(s) unknown if deployed	[] Prior crash without deployment [] One prior crash with deployment [] >1, with at least one deployment [] Previous accident(s) unknown if deployed	
	IF PRIOR DEPLOYMENT [] CHECK IF NOT REINSTALLED	IF PRIOR DEPLOYMENT () CHECK IF NOT REINSTALLED	IF PRIOR DEPLOYMENT [] CHECK IF NOT REINSTALLED	
Type of air bag?	[] Original equipment [] Retrofitted [] Replacement [] Unknown	[] Original equipment [] Retrofitted [] Replacement [] Unknown	[] Original equipment [] Retrofitted [] Replacement [] Unknown	
Had any prior maintenance / service been performed on the air bag system?	[] No [] Unknown [] Yes - Specify:	[] No [] Unknown [] Yes - Specify:	[] No []Unknown [] Yes - Specify:	
Did the air bag inflate during this crash?	[] Yes []Unknown [] No If "NO" was the wiring disconnected prior to the crash? [] Yes [] No [] Unk	[] Yes []Unknown [] No If "NO" was the wiring disconnected prior to the crash? [] Yes [] No [] Unk	[] Yes []Unknown [] No If "NO" was the wiring disconnected prior to the crash? [] Yes [] No [] Unk	
Was the person in this position wearing any type of eye-wear? (Eyeglasses, sunglasses, contact lenses)	[] No [] Unknown	[] No [] Unknown [] Yes - Specify:	[] No [] Unknown [] Yes - Specify:	
Was the air bag in this position contacted by another occupant?	[] No [] Unknown [] Yes - Specify:	[] No [] Unknown [] Yes - Specify:	[] No [] Unknown [] Yes - Specify:	
Describe any additional information here:				

	DRIVER	OCCUPANT #	N" SKIP THIS SECTION) OCCUPANT #
lanufacturer and model of ne safety seat?	DRIVER		
ype of safety seat?		 [] Infant [] Toddler [] Convertible [] Booster [] Integral [] Other Specify: 	[] Infant [] Toddler [] Convertible [] Booster [] Integral [] Other Specify:
/hat direction was it facing rior to the crash?		[] Unknown [] Front [] Rearward [] Unknown	[] Unknown [] Front [] Rearward [] Unknown
las a seat belt used to old the seat in place?		[] No [] Yes [] Unknown	[] No [] Yes [] Unknown
low was the seat belt ecured to the child seat?		 [] Looped through designated rear framing studs [] Looped through arm rest slots [] Belt across safety shield [] Looped through rear frame outside the designated framing struts [] Other (specify):	[] Looped through designated rear framing studs [] Looped through arm rest slots [] Belt across safety shield [] Looped through rear frame outside the designated framing struts [] Other (specify): [] Unknown
Vhat was the safety seat quipped with at time of urchase?		[] Harness [] Shield [] Tether [] Unknown	[] Harness [] Shield [] Tether [] Unknown
Vere any of these added fter they owned the safety eat?		[] Harness [] Shield [] Tether [] None [] Unknown	[] Harness [] Shield [] Tether [] None [] Unknown

INJURY INFORMATION				
	DRIVER	OCCUPANT #	OCCUPANT #	
Yes		[] No [] Yes [] Unknown	[] No [] Yes [] Unknown	
► If "NO" ask next questions				
Did you (or any other occupants) receive any of the following: (If any injuries are checked, go to the manikin page and record location, lesion, and source)	[] Cuts [] Abrasions [] Bruises [] Broken bones [] Head, skull, brain [] Internal injury [] Sprains, strains [] Other (specify):	[] Cuts [] Abrasions [] Bruises [] Broken bones [] Head, skull, brain [] Internal injury [] Sprains, strains [] Other (specify):	[] Cuts [] Abrasions [] Bruises [] Broken bones [] Head, skull, brain [] Internal injury [] Sprains, strains [] Other (specify):	
			IF KEDIA VIKINSPACIES	
Did you (or any other occupants) receive any medical treatment? (check all that apply)	[] Hospital [] Medical clinic [] Paramedics at scene [] Doctor's office Treated by self [] Unknown	[] Hospital [] Medical clinic [] Paramedics at scene [] Doctor's office [] Treated by self [] Unknown	[] Hospital [] Medical clinic [] Paramedics at scene [] Doctor's office [] Treated by self [] Unknown	
Were you (or any other occupants) hospitalized?	No Yes - number of days Unknown	[] No [] Yes - number of days [] Unknown	[] No [] Yes - number of days [] Unknown	
Were you (or any other occupants) treated and released from the emergency room?	No [[] No [] Yes [] Unknown	[] No [] Yes [] Unknown	
Name of medical treatment facility?	A/U			
Have you (or any other occupants) received any follow-up treatment?	No [] Yes - describe:	[] No [] Yes - describe:	[] No [] Yes - describe:	
Have you (or any other occupants) lost any days from work or school (college) due to the crash?	No No Not working prior to crash Yes - number of days Unknown	[] No [] Not working prior to crash [] Yes - number of days [] Unknown	[] No [] Not working prior to crash [] Yes - number of days [] Unknown	
IF REQUIRED: Will you sign a medical release?	[] No [] Yes* [] Unknown	[] No [] Yes* [] Unknown	[] No [] Yes* [] Unknown	
* If not an in-person interview, make appointment to have release signed	DATE: TIME: PLACE:	DATE: TIME: PLACE:	DATE: TIME: PLACE:	

Case Number-Stratum

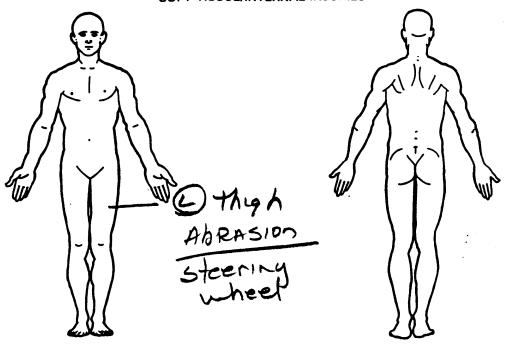
Vehicle Number

Occupant Number

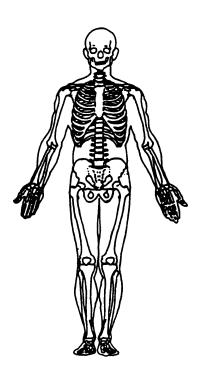
INJURY DATA FROM INTERVIEWEE(S)

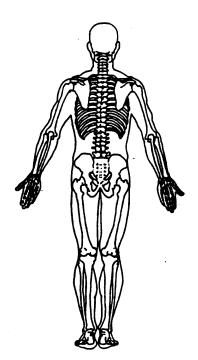
Indicate the Location, Lesion, Detail, and Source of all injuries. Specify interviewee(s): ____

SOFT TISSUE/INTERNAL INJURIES



SKELETAL INJURIES





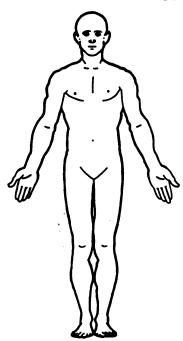
Case Number—Stratum ___

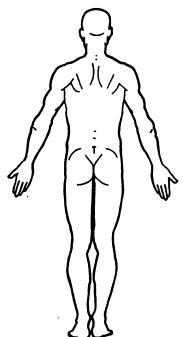
Vehicle Number ___ Occupant Number ___ _

INJURY DATA FROM INTERVIEWEE(S)

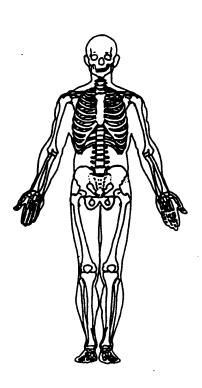
Indicate the Location, Lesion, Detail, and Source of all injuries. Specify interviewee(s):

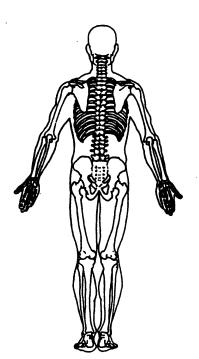
SOFT TISSUE/INTERNAL INJURIES





SKELETAL INJURIES





PSU Number / O Case Number – Stratum _____

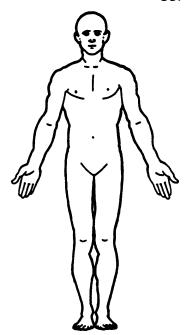
Vehicle Number __

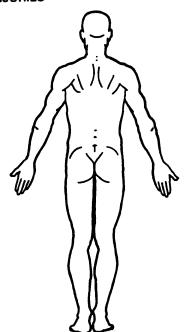
Occupant Number

INJURY DATA FROM INTERVIEWEE(S)

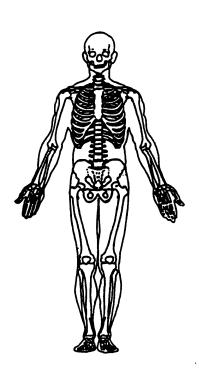
Indicate the Location, Lesion, Detail, and Source of all injuries. Specify interviewee(s):

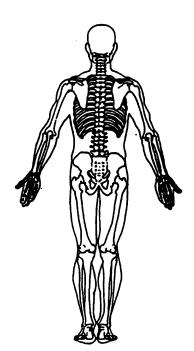
SOFT TISSUE/INTERNAL INJURIES





SKELETAL INJURIES





Appendix H:

NASS CDS OCCUPANT ASSESSMENT FORM:

CASE VEHICLE DRIVER



U.S. Department of Transportation

OCCUPANT ASSESSMENT FORM

Form Approved O.M.B. No. 2127-0021

NATIONAL ACCIDENT SAMPLING SYSTEM

National Highway Traffic Safety Administration	NATIONAL ACCIDENT SAMPLING SYSTEM CRASHWORTHINESS DATA SYSTEM
1.0	OCCUPANT'S SEATING
1. Primary Sampling Unit Number 70 2. Case Number - Stratum 9517	10. Occupant's Seat Position// Front Seat
3. Vehicle Number	(11) Left side (12) Middle
4. Occupant Number	(13) Right side (14) Other (specify):
OCCUPANT'S CHARACTERISTICS	(15) On or in the lap of another occupant
5. Occupant's Age Code actual age at time of accident. (00) Less than one year old (specify by month): (97) 97 years and older (99) Unknown	Second Seat (21) Left side (22) Middle (23) Right side (24) Other (specify): (25) On or in the lap of another occupant Third Seat
6. Occupant's Sex (1) Male (2) Female-not reported pregnant (3) Female-pregnant-1st trimester(1st-3rd month) (4) Female-pregnant-2nd trimester(4th-6th month) (5) Female-pregnant-3rd trimester(7th-9th month) (6) Female-pregnant-term unknown (9) Unknown	(31) Left side (32) Middle (33) Right side (34) Other (specify): (35) On or in the lap of another occupant Fourth Seat (41) Left side (42) Middle (43) Right side (44) Other (specify):
7. Occupant's Height Code actual height to the nearest centimeter. (999) Unknown 64 inches X 2.54 = 162 centimeters	(45) On or in the lap of another occupant (97) In or on unenclosed area (98) Other seat (specify):
8. Occupant's Weight Code actual weight to the nearest kilogram. (999)Unknown / 50 pounds X .4536 =	11. Occupant's Posture (0) Normal posture Abnormal posture (1) Kneeling or standing on seat (2) Lying on or across seat (3) Kneeling, standing or sitting in front of seat (4) Sitting sideways or turned to talk with another occupant or to look out a rear window (5) Sitting on a console (6) Lying back in a reclined seat position (7) Bracing with feet or hands on a surface in front of seat (8) Other abnormal posture (specify): (9) Unknown

EJECTION/ENTRAPMENT				
12. Ejection (0) No ejection (1) Complete ejection (2) Partial ejection (3) Ejection, unknown degree (9) Unknown	0	15. Medium Status (Immediately Prior To Impact) (0) No ejection (1) Open (2) Closed (3) Integral structure (9) Unknown		
13. Ejection Area (0) No ejection (1) Windshield (2) Left front (3) Right front (4) Left rear (5) Right rear (6) Rear (7) Roof (8) Other area (e.g., back of pickup, etc.) (specify): (9) Unknown	0	(0) Not entrapped/exit not inhibited (1) Entrapped/pinned - mechanically restrained (2) Could not exit vehicle due to jammed doors, fire, etc. (specify):		
14. Ejection Medium (0) No ejection (1) Door/hatch/tailgate (2) Nonfixed roof structure (3) Fixed glazing (4) Nonfixed glazing (specify): (5) Integral structure (8) Other medium (specify):	<u>0</u>	(2) Removed from vehicle due to injuries (3) Exited vehicle with some assistance (4) Exited vehicle under own power (5) Occupant fully ejected (9) Unknown		

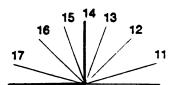
BELT SYSTEM FUNCTION			
18. Manual (Active) Belt System Availability (0) None available (1) Belt removed/destroyed (2) Shoulder belt (3) Lap belt (4) Lap and shoulder belt (5) Belt available—type unknown Integral Belt Partially Destroyed (6) Shoulder belt (lap belt destroyed/removed) (7) Lap belt (shoulder belt destroyed/removed) (8) Other belt (specify):	22. Shoulder Belt Upper Anchorage Adjustment (0) No shoulder belt (1) No upper anchorage adjustment for shoulder belt Adjustable shoulder Belt Upper Anchorage (2) In full up position (3) In mid position (4) In full down position (5) Position unknown (9) Unknown if position has adjustable upper anchorage adjustment		
(9) Unknown 19. Manual (Active) Belt System Use (00) None used, not available, or belt removed/destroyed (01) Inoperative (specify): (02) Shoulder belt (03) Lap belt (04) Lap and shoulder belt (05) Belt used—type unknown	23. Automatic (Passive) Belt System Availability/ Function (0) Not equipped/not available (1) 2 point automatic belts (2) 3 point automatic belts (3) Automatic belts - type unknown Non-functional (4) Automatic belts destroyed or rendered inoperative (9) Unknown 24. Automatic (Passive) Belt System Use		
(08) Other belt used (specify): (12) Shoulder belt used with child safety seat (13) Lap belt used with child safety seat (14) Lap and shoulder belt used with child safety seat (15) Belt used with child safety seat—type unknown (18) Other belt used with child safety seat (specify): (99) Unknown if belt used 20. Proper Use of Manual (Active) Belts	(0) Not equipped/not available/destroyed or rendered inoperative (1) Automatic belt in use (2) Automatic belt not in use (manually disconnected, motorized track inoperative) (specify): (3) Automatic belt use unknown (9) Unknown 25. Automatic (Passive) Belt System Type (0) Not equipped/not available (1) Non-motorized system (2) Motorized system		
(0) None used or not available (1) Belt used properly (2) Belt used properly (3) Shoulder belt worn under arm (4) Shoulder belt worn behind back or seat (5) Belt worn around more than one person (6) Lap belt worn on abdomen (7) Lap belt or lap and shoulder belt used improperly with child safety seat (specify): (8) Other improper use of manual belt system (specify):	(9) Unknown 26. Proper Use of Automatic (Passive) Belt System (0) Not equipped/not available/not used (1) Automatic belt used properly (2) Automatic belt used properly with child safety seat Automatic Belt Used Improperly (3) Automatic shoulder belt worn under arm (4) Automatic shoulder belt worn behind back (5) Automatic belt worn around more than one person (6) Lap portion of automatic belt worn on abdomen (7) Automatic lap and shoulder belt or automatic shoulder belt used improperly with child safety seat (specify):		
21. Manual (Active) Belt Failure Modes During Accident (0) No manual belt used or not available (1) No manual belt failure(s) (2) Torn webbing (stretched webbing not included) (3) Broken buckle or latchplate (4) Upper anchorage separated (5) Other anchorage separated (specify): (6) Broken retractor (7) Combination of above (specify): (8) Other manual belt failure (specify):	(8) Other improper use of automatic belt system (specify): (9) Unknown 27. Automatic (Passive) Belt Failure Modes During Accident (0) Not equipped/not available/not in use (1) No automatic belt failure(s) (2) Torn webbing (stretched webbing not included) (3) Broken buckle or latchplate (4) Upper anchorage separated (5) Other anchorage separated (specify): (6) Broken retractor (7) Combination of above (specify): (8) Other automatic belt failure (specify):		

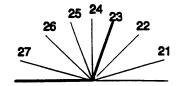
POLICE REPORTED RESTRAINT USE	AIR BAG SYSTEM FUNCTION
28. Police Reported Belt Use (0) None used (1) Police did not indicate belt use (2) Shoulder belt (3) Lap belt (4) Lap and shoulder belt (5) Belt used, type not specified (6) Child safety seat (7) Automatic belt (8) Other type belt, (specify):	30. Frontal Air Bag System Availability/Function (This Occupant Position) (0) Not equipped/not available (1) Air bag Non-functional (2) Air bag disconnected (specify): (3) Air bag not reinstalled (9) Unknown
(9) Police indicated "unknown" 29. Police Reported Air Bag Availability/Function (0) No air bag available (1) Police did not indicate air bag availability/function (2) Deployed (3) Not deployed (4) Unknown if deployed (9) Police indicated "unknown"	31. Frontal Air Bag System Deployment (This Occupant Position) (O) Not equipped/not available (1) Deployed during accident (as a result of impact) (2) Deployed inadvertently just prior to accident (3) Deployed, details unknown (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical) (5) Unknown if deployed (7) Nondeployed (9) Unknown
Check the Primary Source Used In Determining Belt Use. [] Not equipped/not available/destroyed or rendered inoperative [] Vehicle inspection [] Official injury data [32. Other Than First Seat Frontal Air Bag Availability/Function (This Occupant Position) (0) Not equipped/not available (1) Air bag Non-functional (2) Air bag disconnected (specify): (3) Air bag not reinstalled (9) Unknown Specify type of *other* air bag present:
	33. Air Bag(s) Deployment, Other Than First Seat Frontal (This Occupant Position) (0) Not equipped with an "other" air bag (1) Deployed during accident (as a result of impact) (2) Deployed inadvertently just prior to accident (3) Deployed, details unknown (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical) (5) Unknown if deployed (7) Nondeployed (9) Unknown 34. Are There Indications of Air Bag System Failure? (This Occupant Position) (0) Not equipped/not available (1) No (2) Yes (specify):

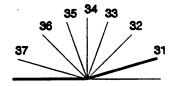
FIRST SEAT FRONTAL AIR BAG SYSTEM EVALUATION			
35. Had Vehicle Been in Previous Accident(s)? (0) Not equipped/not available (1) No previous accidents Yes (2) Previous accident(s) without deployment(s) (3) One previous accident with deployment (4) More than one previous accident with at least one deployment (8) Previous accidents, unknown deployment status (9) Unknown	40. Longitudinal Component of Delta V For Air Bag Deployment Impact (_000) Not equipped/not available Code the value of the delta V for the impact that initiated the air bag deployment (_996) Deployment, unknown longitudinal Delta V (_997) Not deployed (_998) Unknown if deployed (_999) Unknown		
36. Type of Air Bag (O) Not equipped/not available (1) Original manufacturer installed system (2) Retrofitted air bag (3) Replacement air bag (8) Unknown type of air bag (9) Unknown	41. Did Air Bag Module Cover Flap(s) Open At Designated Tear Points? (0) Not equipped/not available (1) No (2) Yes (3) Deployed, unknown if flap(s) opened at designated tear points (7) Not deployed (8) Unknown if deployed		
37. Had Any Prior Maintenance/Service Been Performed On This Air Bag System? (0) Not equipped/not available (1) No prior maintenance (2) Yes, prior maintenance (specify): (9) Unknown 38. Air Bag Deployment Accident Event Sequence Number	(9) Unknown 42. Were Air Bag Module Cover Flap(s) Damaged? (0) Not equipped/not available (1) No (2) Yes (specify): (3) Deployed, unknown if air bag module cover flap(s) damaged (7) Not deployed (8) Unknown if deployed (9) Unknown		
(00) Not equipped/not available Code the accident event sequence number that initiated the air bag deployment (96) Deployed, unknown event (97) Not deployed (98) Unknown if deployed (99) Unknown	43. Was There Damage To The Air Bag? (00) Not equipped/not available (01) Not damaged Yes - Air Bag Damage (02) Ruptured (03) Cut (04) Torn		
39. CDC For Air Bag Deployment Impact (0) Not equipped/not available (1) Highest delta V (2) Second highest delta V (3) Other non-coded delta V (specify): (6) Deployed, unknown event (7) Not deployed (8) Unknown if deployed (9) Unknown	(05) Holed (06) Burned (07) Abraded (88) Other damage (specify): (95) Damaged, details unknown (96) Deployed, unknown if damaged (97) Not deployed (98) Unknown if deployed (99) Unknown		

	FIRST SEAT FRONTAL AIR BAG SYSTEM	HE	EAD RESTRAINT AND SEAT EVALUATION
	EVALUATION continued	40	Head Restraint Type/Damage by Occupant 3
4.4	Source of Air Bag Damage	49.	at This Occupant Position
44.	(00) Not equipped/not available		(0) No head restraints
	(O1) Not damaged		(1) Integral—no damage
	(02) Object worn by occupant, (specify):		(2) Integral—damaged during accident
	(02) Object Well by Goodpally (5)		(3) Adjustable—no damage
	(03) Object carried by occupant, (specify):		(4) Adjustable—damaged during accident
	·		(5) Add-on—no damage
	(04) Adaptive/assistive controls, (specify):		(6) Add-on—damaged during accident
			(8) Other (specify):
	(05) Fire in vehicle		
	(06) Thermal burns		(9) Unknown
	(07) Rescue or emergency efforts		
ļ	(88) Other damage source (specify):	50.	. Seat Type (this Occupant Position)
			(00) Occupant not seated or no seat
1	(95) Damaged, unknown source		(01) Bucket
	(96) Deployed, unknown if damaged		(02) Bucket with folding back
Į	(97) Not deployed		(03) Bench
	(98) Unknown if deployed		(O4) Bench with separate back cushions (O5) Bench with folding back(s)
	(99) Unknown		(06) Split bench with separate back cushions
1	· 1	l	(05) Split bench with folding back(s)
45.	Was The Air Bag Tethered?		(08) Pedestal (i.e., column supported)
Ì	(O) Not equipped/not available		(09) Box mounted seat (i.e., van type)
	(1) No		(10) Other seat type (specify):
	(2) Yes (specify number of tether straps):		(10) Other seat type topocity.
		ł	(99) Unknown
	(3) Deployed, unknown if tethered	l	(55) Stikilotti
	(7) Not deployed	51	. Seat Orientation (this Occupant Position)
	(8) Unknown if deployed	• •	(0) Occupant not seated or no seat
1	(9) Unknown	ļ	(1) Forward facing seat
46.	Did The Air Bag Have Vent Ports?	1	(2) Rear facing seat
	(0) Not equipped/not available	İ	(3) Side facing seat (inward)
Ì	(1) No		(4) Side facing seat (outward)
ļ	(2) Yes (specify number of vent ports):		(8) Other (specify):
ł	<u> </u>	1	
1	(3) Deployed, unknown if vent ports present		(9) Unknown
	(7) Not deployed		2 Track Adjusted Position Prior To Impact
1	(8) Unknown if deployed	52	2. Seat Track Adjusted Position Prior To Impact <u>5</u> (0) Occupant not seated or no seat
ł	(9) Unknown		(1) Non-adjustable seat track
147	Was the Air Bag in this Occupant's Position	1	(1) MANILANIASTANIE SAUT FLOCK
4/.	Contacted by Another Occupant?	1	Adjustable Seat Track
1	(0) Not equipped/not available	1	(2) Seat at forward most track position
	(1) No		(3) Seat between forward most and middle track
1	(2) Yes (specify):	1	positions
1			(4) Seat at middle track position
1	(3) Deployed, unknown if other occupant contact		(5) Seat between middle and rear most track
1	to air bag	1	positions
1	(7) Not deployed		(6) Seat at rear most track position
	(8) Unknown if deployed	1	(9) Unknown
1	(9) Unknown		
	2		
48.	Was This Occupant Wearing Eye-wear?		
	(O) Not equipped/not available	1	
1	(1) No		
.	(2) Eyeglasses/sunglasses		
	(3) Contact lenses		
1	(4) Deployed, unknown if eyewear worn	1	
	(7) Not deployed		
	(8) Unknown if deployed		
1	(9) Unknown	1	

	HEAD RESTRAINT AND SE	AT EVALUATION continued
53.	Seat Back Incline Prior and Post Impact (00) Occupant not seated or no seat (01) Not adjustable	
	Upright prior to impact (11) Moved to completely rearward position (12) Moved to rearward midrange position (13) Moved to slightly rearward position (14) Retained pre-impact position (15) Moved to slightly forward position (16) Moved to forward midrange position (17) Moved to completely forward position	15 14
	Slightly reclined prior to impact (21) Moved to completely rearward position (22) Moved to rearward midrange position (23) Retained pre-impact position (24) Moved to upright position (25) Moved to slightly forward position (26) Moved to forward midrange position (27) Moved to completely forward position	25 24 26 27
	Completely reclined prior to impact (31) Retained pre-impact position (32) Moved to rearward midrange position (33) Moved to slightly rearward position (34) Moved to upright position (35) Moved to slightly forward position (36) Moved to forward midrange position (37) Moved to completely forward position	35 34 36
	(99) Unknown	
54.	Seat Performance (this Occupant Position) (0) Occupant not seated or no seat (1) No seat performance failure(s) (2) Seat adjusters failed (3) Seat back folding locks or "seat back" failed (specify):	
	(4) Seat track/anchors failed	
	(5) Deformed by impact of occupant(6) Deformed by passenger compartment intrusion, (specify):	
÷	(7) Combination of above (specify):	
	(8) Other (specify):	
	(9) Unknown	







	Cl	HILD SAF	ETY	Y SEA	T		
55.	(000) No child safety seat	00	58.	Child	Safety Seat Harness Usage	00	
	Applicable codes are found in your NASS Data Collection, Coding and Editing (950) Built-in child safety seat (997) Other make/model (specify): (998) Unknown make/model	CDS	59.	Child	Safety Seat Shield Usage	00	
					Safety Seat Tether Usage	00	
	(999) Unknown if child safety seat used	4		Variat	Options below applicable to bles OA58-OA60. No child safety seat		
56.	Type of Child Safety Seat	0					
	(0) No child safety seat (1) Infant seat (2) Toddler seat			(01)	* Designed With Harness/Shield/Tether) After market harness/shield/tether added, not used		
	(3) Convertible seat(4) Booster seat - with shield			(02) After market harness/shield/tether used(03) Child safety seat used, but no after market			
	(5) Booster seat - without shield (7) Other type child safety seat (specify):			(09)	harness/shield/tether added Unknown if harness/shield/tethe added or used	: Γ	
	(8) Unknown child safety seat type (9) Unknown if child safety seat used			(11)	ned With Harness/Shield/Tether Harness/shield/tether not used		
57.	Child Safety Seat Orientation (00) No child safety seat	00		(12) Harness/shield/tether used (19) Unknown if harness/shield/tether used			
	Designed for Rear Facing for This Age/Weight (01) Rear facing			Unknown If Designed With Harness/Shield/Tether (21) Harness/shield/tether not used (22) Harness/shield/tether used			
	(O2) Forward facing (O8) Other orientation (specify):				Unknown if harness/shield/tethe Unknown if child safety seat us		
	(09) Unknown orientation			(00)			
	Designed For Forward Facing for This Age.	/Weight					
	(11) Rear facing (12) Forward facing		1				
	(18) Other orientation (specify):						
	(19) Unknown orientation						
	Unknown Design or Orientation For This Age/Weight, or Unknown Age/Weight (21) Rear facing (22) Forward facing				•		
	(28) Other orientation (specify):						
	(29) Unknown orientation						
	(99) Unknown if child safety seat used						
			1				

National Accident Sampling System-Crashworthiness Da	ta System: Occupant Assessment Form	Page 9
INJURY CONSEQUENCES 61. Injury Severity (Police Rating) (0) O - No injury (1) C - Possible injury (2) B - Nonincapacitating injury (3) A - Incapacitating injury (4) K - Killed (5) U - Injury, severity unknown (6) Died prior to accident (9) Unknown 62. Treatment - Mortality (0) No treatment (1) Fatal (2) Fatal - ruled disease (specify): Nonfatal (3) Hospitalization (4) Transported and released (5) Treatment at scene - nontransported (6) Treatment later (7) Treatment - other (specify): (8) Transported to a medical facility-unknown if treated (9) Unknown	63. Type Of Medical Facility (for Initial Treatm (0) Not treated at a medical facility (1) Trauma center (2) Hospital (3) Medical clinic (4) Physician's office (5) Treatment later at medical facility (8) Other (specify): (9) Unknown 64. Hospital Stay (00) Not Hospitalized Code the number of days (up through that the occupant stayed in hospital. (61) 61 days or more (99) Unknown 65. Working Days Lost Code the number of days (up through 60) that the occupant lost from work due to the accident (00) No working days lost (61) 61 days or more (62) Fatally injured (97) Not working prior to accident (99) Unknown	_
	ORK HERE LES 66-74	
TO BE CODED BY	THE ZONE CENTER	

TO BE CODED BY THE ZONE CENTER

INJURY CONSEQUENCES		TRAUMA DATA
66. Time to Death Code number of hours from time of accident to time of death up through 24 hours. If time of death is greater than 24 hours, code number of days. (Note: 1 day 31, 2 days = 32, n days = 30 +n up through 30 days = 60) (OO) Not fatal (96) Fatal - ruled disease (99) Unknown	y =	71. Glasgow Coma Scale (GCS) Score (at Medical Facility) (00) Not injured (01) Injured - not treated at medical facility (02) No GCS Score at medical facility (03-15) Code the actual value of the initial GCS Score recorded at medical facility. (97) Injured, details unknown (99) Unknown if injured
67. 1st Medically Reported Cause of Death 68. 2nd Medically Reported Cause of Death		(1) No - blood not given (2) Yes - blood given (specify units):
69. 3rd Medically Reported Cause of Death Code the Occupant Injury from line number(s) for the medically reported injury(s) which reportedly contributed to this occupant's death (00) Not fatal or no additional causes (96) Mode of death given but specific injuries are not linked to cause of death. (specify):	00	(9) Unknown if blood given 73. Arterial Blood Gases (ABG) – HCO ₃ (00) Not injured (01) Injured, ABGs not measured or reported (02-50) Code the actual value of the HCO ₃ (96) ABGs reported, HCO ₃ unknown (97) Injured, details unknown (99) Unknown if injured
(97) Other result (includes fatal ruled disease) (specify):		BELT USE DETERMINATION
70. Number of Recorded Injuries for This Occupant Code the actual number of injuries recorded for this occupant. (00) No recorded injuries (97) Injured, details unknown (99) Unknown if injured	02	74. Primary Source of Belt Use Determination (0) Not equipped/not available/destroyed or rendered inoperative (1) Vehicle inspection (2) Official injury data (3) Driver/occupant interview (8) Other (specify): (9) Unknown if belt used

Appendix I:

NASS CDS OCCUPANT INJURY FORM:

CASE VEHICLE DRIVER

U.S. Department of Transportation National Highway Traffic Safety

OCCUPANT INJURY FORM

Form Approved O.M.B. No. 2127-0021

NATIONAL ACCIDENT SAMPLING SYSTEM CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number

2. Case Number - Stratum

7 5 1 7 4. Occupant Number

2. Case Number - Stratum

INJURY DATA

Record below the actual injuries sustained by this occupant that were identified from the official and unofficial data sources. Remember not to double count an injury just because it was identified from two different sources. If greater than ten injuries have been documented, encode the balance on the Occupant Injury Supplement.

				A.I.S !	90				Injury		Occupant
	Source of Injury Data	Body Region	Type of Anatomic Structure	Specific Anatomic Structure	Level of Injury	A.I.S. Severity	Aspect	Injury Source	Source Confidence Level	Direct/ Indirect Injury	Area Intrusion Number
ns to	5. <u>7</u>	6. <u>7</u>	7. <u>9</u>	8. <u>2</u> 0	900	10. /	11. 2 12.	604	13. 2 1	4. <u>3</u>	15. <u>O</u> C
	16. 7	17. <u>6</u>	18. 4	9. <u>0 2</u>	20. <u>7</u> 8	21/	22. 6 23.	170	24. 2	25	_{26.} <u>0</u> <u>0</u>
3rd	27	28	29 3	30	31	32	33 34.		35 3	36	37
4th	38	39	40 4	11	42	43	44 45.		46	17. <u> </u>	48
5th	49	50	51	52	53	54	55 56.		57	58	59
6th	60	61	62	53	64	65	66 67.		68	69	70
7th	71	72	73	74	75	76	77 78.		79	80	81
8th	82	83	84	35	86	87	88 89.		90	91	92
9th	93	94	95	96	97	98	99 100.	· · · · · · · · · · · · · · · · · · ·	101 1	02 1	03
10th	104	105	106 1	07	108	109	110 111.	·	112 1	13	114

				OCC	UPANT I	INJURY	DATA				
	Source of Injury	Body	Type of Anatomic	A.I.S 90 Specific Anatomic	Level of	A.I.S.	A	Injury Source	Injury Source Confidence Level	Direct/ Indirect Injury	Occupar Area Intrusion Number
	Data	Region	Structure	Structure	Injury	Severity	Aspect	Source	revei	injury	Number
11th		 .				_			_		
									•		
12th		_									
13th		_									
14th							_		_	_	
15th									_		
15(11		_				: .					
16th			_			_			_	******	
17th	_		_								
18th		_									
19th											
											
20th		_								_	
21st		_					_				
22nd		_		·		_	_		_		
23rd		_	_			_			<u>.</u>		
24th		_		<u> </u>		- .	_				
25th											

DIRECT/INDIRECT INJURY

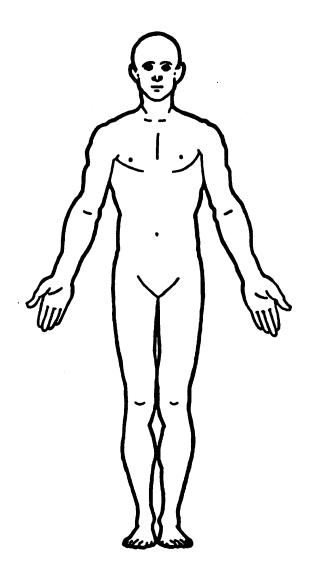
(06) Lumbar

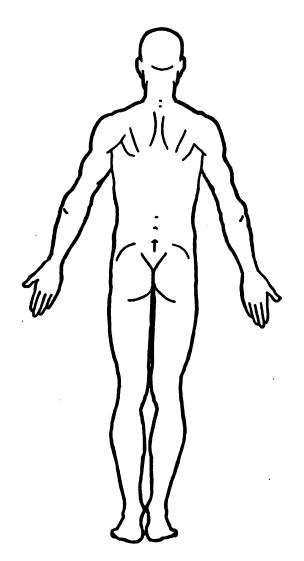
SOURCE OF INJURY DATA

OCCUPANT INJURY CLASSIFICATION Level of Injury Aspect Specific Anatomic **Body Region** Structure Specific injuries are Right (1)Head Left assigned consecutive (2)Face (2) Bilateral (3) (3) Vessels, Nerves, Organs. two-digit numbers Neck Central Bones, Joints are assigned beginning with 02. (4) (4)Thorax (5) Anterior Abdomen consecutive two digit (5) (6) **Posterior** To the extent possible, Spine numbers beginning with (6) **Upper Extremity** within the organizational (7) Superior (7) framework of the AIS, 00 (8) Inferior (8) Lower Extremity is assigned to an injury (9) Unknown The exceptions to this rule Unspecified (9) **(O)** Whole region NFS as to severity or apply to: where only one injury is given in the dictionary for Type of Anatomic Whole Area (02) Skin - Abrasion that anatomic structure. Structure (04) Skin - Contusion 99 is assigned to any (06) Skin - Laceration injury NFS as to lesion or Whole Area (1) (08) Skin - Avulsion severity. (2) Vessels (10)**Amputation** (3) Nerves (4) Organs (includes (20)Burn Abbreviated Injury Scale (30) Crush Muscles/ligaments) (40)Degloving Minor Injury (1)(5) Skeletal (includes Injury - NFS Moderate Injury (2) ioints) (50)(3) Serious Injury (90) Trauma, other than Head - LOC (6)Severe Injury mechanical (4) (9) Skin (5) Critical Injury Maximum Head - LOC (6) (untreatable) (02) Length of LOC (7) Injured, unknown severity (04) Level (06) of (08) Consciousness (10) Concussion **Spine** (02) Cervical (04) Thoracic

CONFIDENCE LEVEL OFFICIAL RECORDS (1) Certain Direct contact injury (1) Autopsy records with or without hospital/medical (2) Probable (2) Indirect contact injury Noncontact injury (3) Possible (3) records (2) Hospital/medical records other (9) Unknown Injured, unknown source than emergency room (e.g., discharge summary) (3) Emergency room records only (including associated X-rays or other lab reports) (4) Private physician, walk-in or emergency clinic **UNOFFICIAL RECORDS** (5) Lay coroner report (6) E.M.S. personnel (7) Interviewee (8) Other source (specify): (9) Police

INJURY SOURCE

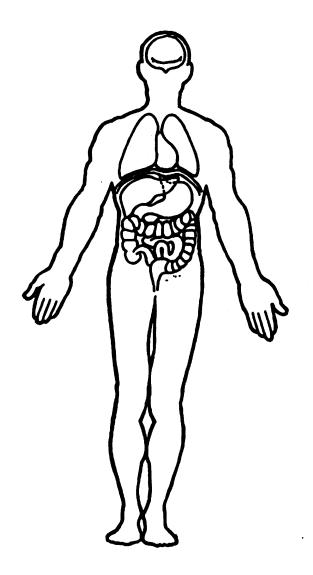


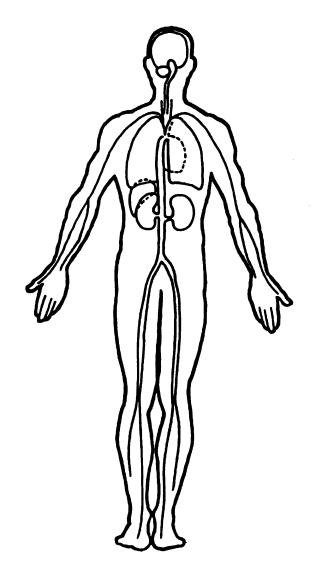


	OFFICIAL IN HIDV DATA OVELETAL IN HIDIEG
	OFFICIAL INJURY DATA — SKELETAL INJURIES
Restrained?	Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are
Yes	unavailable.)
Blood Alcohol Level (mg/dl)	(hat)
BAL =	
Glasgow Coma Scale Score GCSS =	
Units of Blood Given Units =	
Arterial Blood Gases pH =	
PO, =	
нсо,	

.

							•
FRON1	т	(102)	Right side hardware or	(183)	Air bag-passenger side and	(411)	Wall mounted head rest
(001)	Windshield		armrest		object held		(used behind wheel chair)
	Mirror	(103)	Right A (A1/A2)-pillar	(184)	Air bag-passenger side and	(412)	Other adaptive device
	Sunvisor	(104)	Right B-pillar		object in mouth		(specify):
	Steering wheel rim	(105)	Other right pillar (specify):	(185)	Air bag compartment		
	Steering wheel hub/spoke				cover-passenger side		
	Steering wheel (combination	(106)	Right side window glass	(186)	Air bag compartment	EXTE	RIOR of OCCUPANT'S
.000,	of codes 004 and 005)		Right side window frame		cover-passenger side and	VEHIC	CLE
(007)	Steering column,		Right side window sill		syewear	(451)	Hood
(00,,	transmission selector lever,		Right side window glass	(187)	Air bag compartment	(452)	Outside hardware (e.g.,
	other attachment	,,,,,,	including one or more of the		cover-passenger side and		outside mirror, antenna)
, (A)	Cellular telephone or CB		following: frame, window		jewelry	(453)	Other exterior surface or
(000)	radio		sill, A (A1/A2)-pillar, B-pillar,	(188)	Air bag compartment		tires (specify):
,000	Add on equipment (e.g.,		or roof side rail.		cover-passenger side and		
(003)	tape deck, air conditioner)	(110)	Other right side object		object held		
	Left instrument panel and	(,	(specify):	(189)	Air bag compartment	(454)	Unknown exterior objects
(010)			(specify).	,,,,,,	cover-passenger side and	,	
	below				object in mouth	FYTE	RIOR OF OTHER MOTOR
(011)	Center instrument panel and	INTER	IOB	(190)	Other air bag (specify)	VEHIC	
	below			(130)	Other an Day (Specify		Front bumper
(012)	Right instrument panel and		Seat, back support	(105)	Other air bag compartment		Hood edge
	below	(152)	Belt restraint	(193)	cover (specify)		Other front of vehicle
	Glove compartment door	,,	webbing/buckle		COTAL (SPECIFY)	(503)	(specify):
	Knee boister	(153)	Belt restraint 8-pillar or door				(Specify):
(015)	Windshield including one or		frame attachment point				Hand.
	more of the following: front	(154)	Other restraint system	ROOF		• • • • • • • • • • • • • • • • • • • •	Hood
	header, A (A1/A2)-pillar,		component (specify):		Front header		Hood ornament
	instrument panel, mirror, or				Rear header		Windshield, roof rail, A-pills
	steering assembly (driver	(155)	Head restraint system		Roof left side rail		Side surface
	side only)	(160)	Other occupants (specify):	(204)	Roof right side rail		Side mirrors
(016)	Windshield including one or			(205)	Roof or convertible top	(509)	Other side protrusions
	more of the following: front	(161)	Interior loose objects				(specify):
	header, A (A1/A2)-pillar,	(162)	Child safety seat (specify):	FLOOI	₹		
	instrument panel, or mirror			(251)	Floor (including toe pan)	(510)	Rear surface
	(passenger side only)	(163)	Other interior object	(252)	Floor or console mounted	(511)	Undercarriage
(017)	Windshield reinforced by		(specify):		transmission lever, including	(512)	Tires and wheels
	exterior object (specify)				console	(513)	Other exterior of other
				(253)	Parking brake handle		motor vehicle (specify):
(O19)	Other front object (specify):	AIR B	AG	(254)	Foot controls including		
(0.0,		(170)	Air bag-driver side		parking brake		
			Air bag-driver side and			(514)	Unknown exterior of other
LEFT S	EIDE	*****	eyewear	REAR			motor vehicle
	Left side interior surface,	(172)	Air bag-driver side and		Backlight (rear window)		
(051)		, ,	jewelry		Backlight storage rack,	OTHE	R VEHICLE OR OBJECT IN
	excluding hardware or	/172	Air bag-driver side and	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	door, etc.		ENVIRONMENT
	armrests	(1/3)		(303)	Other rear object (specify):		Ground
(U52)	Left side hardware or	1970	object held	,303)	outer topect (specify):		Other vehicle or object
	armrest	(1/4)	Air bag-driver side and			(330)	•
	Left A (A1/A2)-piller		object in mouth	484-	THE IACCIOTHE COUNTY		(specify):
	Left B-piller	(175)	Air bag compartment		TIVE (ASSISTIVE) DRIVING	/E00:	Habania naktala aa aktala
(055)	Other left piller (specify):		cover-driver side		MENT	(599)	Unknown vehicle or object
		(176)	Air bag compartment	(401)	Hend controls for		
(056)	Left side window glass		cover-driver side and		braking/acceleration		CONTACT INJURY
(057)	Left side window frame		eyewear	(402)	Steering control devices		Fire in vehicle
(058)	Left side window sill	(177)	Air bag compartment		(attached to OEM steering		Flying glass
(059)	Left side window glass		cover-driver side and jewelry		wheel)	(603)	Other noncontact injury
	including one or more of the	(178)	Air beg compartment	(403)	Steering knob attached to		source
	following: frame, window		cover-driver side and object		steering wheel		(specify):
	sill, A (A1/A2)-pillar, B-pillar,		held	(405)	Replacement steering wheel	(604)	Air bag exhaust gases
	or roof side rail.	(179)	Air bag compartment		(i.e., reduced diameter)	(697)	Injured, unknown source
(060)	Other left side object		cover-driver side and object	(406)	Joy stick steering controls		
	(specify):		in mouth		Wheelchair tie-downs		
	(apaging)	(180)	Air bag-passenger side		Modification to seat belts,		
			Air bag-passenger side and		(specify):		
RIGHT	r sine	,,	evemest	(ADQ)	Additional or relocated		
		(1821		,-031	switches, (specify):		
(101)	Right side interior surface,	(102)	Air bag-passenger side and		Contact, tapage 41.		
	excluding hardware or		jewetry		Raised roof		
	armrests						





	Cause of Death						
		ICD:9·CM					
		ICD J CNI					
:							
		OTHER DRUGS (GV16)	1				
Ci-	man Tort Turns	Drug(s)	Drug Type				
	nen Test Type od and urine tests	Diago					
	od test only						
ı —	ne test only						
	er test specified						
		•					
		Medical Record Abbreviations					
Symbol		Record Type Description					
MIR	Medical examiner's reco	ation based upon an invasive examination of a body rd-where the information reported on the patient is based on a non-invasive ex	amination of the body				
AR	nationt's admission; thes	ary-any medical information on this record should be considered as post-ER size records are common in short hospitalizations and usually only contain: admis	sion DX(s), final DX(s),				
FS	and a listing of surgical to Admission/discharge fact	treatments; ICD-9-CM codes are frequently available. c sheetface sheets are essentially the same as admission record/summaries and	contain the same types of				
DS	information as discussed Discharge summary—sho	rten history of a patient's hospitalization highlighting the patient's major injuric	s; this record is often				
06	written from the perspec	tive of its author which in many cases is a consultant	it a specific trauma; pa-				
	tients who survive the su	argery are normally admitted; thus, this record is normally considered post-ER; at surgery, then treat it as emergency-room related	however, if this record				
PX.	Padiographic records to	aken after the patient has been admitted, or while in surgery or intensive care upplemental record containing additional nurses notes taken after the patient's	admission				
IN HP	History and physical exa	m—medical history and the results of the physical exam obtained by the emerger on arrival at the emergency room	ıcy room physician as-				
CN	Committation reconstructor	sultations are in essence additional history and physicial exams performed by de	ectors whose expertise was				
EZR	requested by the emergency room physician; the consultation may occur during the emergency room visit or after admission EMER Emergency room report—where the author of this information is undefined						
ED EN	EN Emergency room nurse-"nurse/complaint of" section on the emergency room report ED Emergency room doctor"objective/physical exam" section plus "diagnosis and treatment" sections (i.e., doctor portion of emer-						
NN	gency room report) Nurse notes—supplement	al record containing additional notes taken by the emergency room nurse(s)					
EX CV	Dadianambia maardanta	aken during the patients stay in the emergency room nent of cause of death for legal specific regarding injuries; care must be exercise	ed to ascertain the creden-				
CIR	tials of the verdict's sutl						
ET	has the title of a coroner	nician—report by a person who qualifies as an emergency medical services techn	ician (EMS or EMT)				
0	Other source-medical in	formation based on an other source (e.g., newspaper, DVM-Doctor of Vetering	ary Medicine)				
1							

Appendix J:

NASS CDS OCCUPANT ASSESSMENT FORM:

CASE VEHICLE RIGHT FRONT PASSENGER



U.S. Department of Transportation National Highway Traffic Safety Administration

OCCUPANT ASSESSMENT FORM

Form Approved O.M.B. No. 2127-0021

NATIONAL ACCIDENT SAMPLING SYSTEM CRASHWORTHINESS DATA SYSTEM

1 0	OCCUPANT'S SEATING
1. Primary Sampling Unit Number	10. Occupant's Seat Position 13
2. Case Number - Stratum 95/4	Front Seat
3. Vehicle Number	(11) Left side (12) Middle
4. Occupant Number	(13) Right side
OCCUPANT'S CHARACTERISTICS	(14) Other (specify):(15) On or in the lap of another occupant
	(15) On or in the rap of another occupant
5. Occupant's Age <u>2</u> 7	Second Seat
Code actual age at time of accident. (OO) Less than one year old (specify by month):	(21) Left side (22) Middle
	(23) Right side
(97) 97 years and older (99) Unknown	(24) Other (specify):(25) On or in the lap of another occupant
(99) Unknown	(23) On or in the tap or another occupant
	Third Seat
6. Occupant's Sex	(31) Left side (32) Middle
(1) Male	(33) Right side
(2) Female-not reported pregnant	(34) Other (specify):
(3) Female-pregnant-1st trimester(1st-3rd month) (4) Female-pregnant-2nd trimester(4th-6th month)	(35) On or in the lap of another occupant
(5) Female-pregnant-3rd trimester(7th-9th month)	Fourth Seat
(6) Female-pregnant-term unknown	(41) Left side
(9) Unknown	(42) Middle (43) Right side
	(44) Other (specify):
7. Occupant's Height / 6 8	(45) On or in the lap of another occupant
7. Occupant's Height Code actual height to the nearest	(97) In or on unenclosed area
centimeter.	(98) Other seat (specify):
(999) Unknown	(99) Unknown
le inches $\times 2.54 = 167$ centimeters	
8. Occupant's Weight 577	11. Occupant's Posture
Code actual weight to the nearest	(O) Normal posture
kilogram.	Abnormal posture
(999)Unknown	(1) Kneeling or standing on seat (2) Lying on or across seat
170 pounds x .4536 = 77 kilograms	(3) Kneeling, standing or sitting in front of seat
9. Occupant's Role	(4) Sitting sideways or turned to talk with another occupant or to look out a rear window
(1) Driver	(5) Sitting on a console(6) Lying back in a reclined seat position
(2) Passenger (9) Unknown	(7) Bracing with feet or hands on a surface in front
107 Olikilowii	of seat (8) Other abnormal posture (specify):
·	(9) Unknown
	(3) Silkilowii
	·

	EJECTION/ENTRAPMENT							
(ijection O) No ejection 1) Complete ejection 2) Partial ejection 3) Ejection, unknown degree 9) Unknown	0	15. Medium Status (Immediately Prior To Impact) (O) No ejection (1) Open (2) Closed (3) Integral structure (9) Unknown					
	ijection Area O) No ejection 1) Windshield 2) Left front 3) Right front 4) Left rear 5) Right rear 6) Rear 7) Roof 8) Other area (e.g., back of pickup, etc.)	0	16. Entrapment (0) Not entrapped/exit not inhibited (1) Entrapped/pinned - mechanically restrained (2) Could not exit vehicle due to jammed doors, fire, etc. (specify): (9) Unknown 17. Occupant Mobility (0) Occupant fatal before removed from vehicle (1) Removed from vehicle while unconscious or disoriented					
	Ejection Medium O) No ejection 1) Door/hatch/tailgate 2) Nonfixed roof structure 3) Fixed glazing 4) Nonfixed glazing (specify): 5) Integral structure 8) Other medium (specify):	<u></u>	(2) Removed from vehicle due to injuries (3) Exited vehicle with some assistance (4) Exited vehicle under own power (5) Occupant fully ejected (9) Unknown					

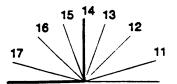
BELT SYSTE	M FUNCTION
18. Manual (Active) Belt System Availability (0) None available (1) Belt removed/destroyed (2) Shoulder belt (3) Lap belt (4) Lap and shoulder belt (5) Belt available—type unknown Integral Belt Partially Destroyed (6) Shoulder belt (lap belt destroyed/removed) (7) Lap belt (shoulder belt destroyed/removed) (8) Other belt (specify):	22. Shoulder Belt Upper Anchorage Adjustment (0) No shoulder belt (1) No upper anchorage adjustment for shoulder belt Adjustable shoulder Belt Upper Anchorage (2) In full up position (3) In mid position (4) In full down position (5) Position unknown (9) Unknown if position has adjustable upper anchorage adjustment 23. Automatic (Passive) Belt System Availability/
(9) Unknown 19. Manual (Active) Belt System Use (00) None used, not available, or belt removed/destroyed (01) Inoperative (specify): (02) Shoulder belt (03) Lap belt (04) Lap and shoulder belt	Function (0) Not equipped/not available (1) 2 point automatic belts (2) 3 point automatic belts (3) Automatic belts - type unknown Non-functional (4) Automatic belts destroyed or rendered inoperative (9) Unknown 24. Automatic (Passive) Belt System Use
(05) Belt used—type unknown (08) Other belt used (specify): (12) Shoulder belt used with child safety seat (13) Lap belt used with child safety seat (14) Lap and shoulder belt used with child safety seat (15) Belt used with child safety seat—type unknown (18) Other belt used with child safety seat (specify): (99) Unknown if belt used	(0) Not equipped/not available/destroyed or rendered inoperative (1) Automatic belt in use (2) Automatic belt not in use (manually disconnected, motorized track inoperative) (specify): (3) Automatic belt use unknown (9) Unknown 25. Automatic (Passive) Belt System Type (0) Not equipped/not available (1) Non-motorized system
20. Proper Use of Manual (Active) Belts (0) None used or not available (1) Belt used properly (2) Belt used properly with child safety seat **Belt Used Improperly** (3) Shoulder belt worn under arm (4) Shoulder belt worn behind back or seat (5) Belt worn around more than one person (6) Lap belt worn on abdomen (7) Lap belt or lap and shoulder belt used improperly with child safety seat (specify): (8) Other improper use of manual belt system (specify):	(2) Motorized system (9) Unknown 26. Proper Use of Automatic (Passive) Belt System (0) Not equipped/not available/not used (1) Automatic belt used properly (2) Automatic belt used properly with child safety seat Automatic Belt Used Improperly (3) Automatic shoulder belt worn under arm (4) Automatic shoulder belt worn behind back (5) Automatic belt worn around more than one person (6) Lap portion of automatic belt worn on abdomen (7) Automatic lap and shoulder belt or automatic shoulder belt used improperly with child safety seat (specify):
21. Manual (Active) Belt Failure Modes During Accident (0) No manual belt used or not available (1) No manual belt failure(s) (2) Torn webbing (stretched webbing not included) (3) Broken buckle or latchplate (4) Upper anchorage separated (5) Other anchorage separated (specify): (6) Broken retractor (7) Combination of above (specify): (8) Other manual belt failure (specify):	(8) Other improper use of automatic belt system (specify): (9) Unknown 27. Automatic (Passive) Belt Failure Modes During Accident (0) Not equipped/not available/not in use (1) No automatic belt failure(s) (2) Torn webbing (stretched webbing not included) (3) Broken buckle or latchplate (4) Upper anchorage separated (5) Other anchorage separated (specify): (6) Broken retractor (7) Combination of above (specify): (8) Other automatic belt failure (specify):

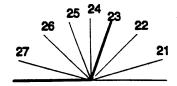
	POLICE REPORTED RESTRAINT USE	AIR BAG SYSTEM FUNCTION
28.	Police Reported Belt Use (0) None used (1) Police did not indicate belt use (2) Shoulder belt (3) Lap belt (4) Lap and shoulder belt (5) Belt used, type not specified (6) Child safety seat (7) Automatic belt (8) Other type belt, (specify):	30. Frontal Air Bag System Availability/Function (This Occupant Position) (0) Not equipped/not available (1) Air bag Non-functional (2) Air bag disconnected (specify): (3) Air bag not reinstalled (9) Unknown
29.	Police Reported Air Bag Availability/Function (O) No air bag available (1) Police did not indicate air bag availability/function (2) Deployed (3) Not deployed (4) Unknown if deployed (9) Police indicated "unknown"	 31. Frontal Air Bag System Deployment (This Occupant Position) (0) Not equipped/not available (1) Deployed during accident (as a result of impact) (2) Deployed inadvertently just prior to accident (3) Deployed, details unknown (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical) (5) Unknown if deployed (7) Nondeployed (9) Unknown
	Check the Primary Source Used In Determining Belt Use. [] Not equipped/not available/destroyed or rendered inoperative [] Vehicle inspection [] Official injury data [] Driver/occupant interview [] Other (specify): [] Unknown if belt used	32. Other Than First Seat Frontal Air Bag Availability/Function (This Occupant Position) (0) Not equipped/not available (1) Air bag Non-functional (2) Air bag disconnected (specify): (3) Air bag not reinstalled (9) Unknown Specify type of "other" air bag present:
		33. Air Bag(s) Deployment, Other Than First Seat Frontal (This Occupant Position) (0) Not equipped with an "other" air bag (1) Deployed during accident (as a result of impact) (2) Deployed inadvertently just prior to accident (3) Deployed, details unknown (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical) (5) Unknown if deployed (7) Nondeployed (9) Unknown
		34. Are There Indications of Air Bag System Failure? (This Occupant Position) (0) Not equipped/not available (1) No (2) Yes (specify): / OCC QUEING DEPloyment (9) Unknown

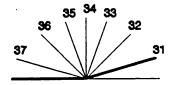
FIRST SEAT FRONTAL AIR	BAG SYSTEM EVALUATION
35. Had Vehicle Been in Previous Accident(s)? (0) Not equipped/not available (1) No previous accidents Yes (2) Previous accident(s) without deployment(s) (3) One previous accident with deployment (4) More than one previous accident with at least one deployment (8) Previous accidents, unknown deployment status (9) Unknown	40. Longitudinal Component of Delta V For Air Bag Deployment Impact (_000) Not equipped/not available Code the value of the delta V for the impact that initiated the air bag deployment (_996) Deployment, unknown longitudinal Delta V (_997) Not deployed (_998) Unknown if deployed (_999) Unknown
36. Type of Air Bag (0) Not equipped/not available (1) Original manufacturer installed system (2) Retrofitted air bag (3) Replacement air bag (8) Unknown type of air bag (9) Unknown	41. Did Air Bag Module Cover Flap(s) Open At Designated Tear Points? (0) Not equipped/not available (1) No (2) Yes (3) Deployed, unknown if flap(s) opened at designated tear points (7) Not deployed (8) Unknown if deployed
37. Had Any Prior Maintenance/Service Been Performed On This Air Bag System? (0) Not equipped/not available (1) No prior maintenance (2) Yes, prior maintenance (specify): (9) Unknown 38. Air Bag Deployment Accident Event Sequence Number	 (9) Unknown 42. Were Air Bag Module Cover Flap(s) Damaged?
(00) Not equipped/not available Code the accident event sequence number that initiated the air bag deployment (96) Deployed, unknown event (97) Not deployed (98) Unknown if deployed (99) Unknown	43. Was There Damage To The Air Bag? (00) Not equipped/not available (01) Not damaged Yes - Air Bag Damage (02) Ruptured (03) Cut (04) Torn
39. CDC For Air Bag Deployment Impact (0) Not equipped/not available (1) Highest delta V (2) Second highest delta V (3) Other non-coded delta V (specify): (6) Deployed, unknown event (7) Not deployed (8) Unknown if deployed (9) Unknown	(05) Holed (06) Burned (07) Abraded (88) Other damage (specify): (95) Damaged, details unknown (96) Deployed, unknown if damaged (97) Not deployed (98) Unknown if deployed (99) Unknown

	FIRST SEAT FRONTAL AIR BAG SYSTEM	HE	EAD RESTRAINT AND SEAT EVALUATION
	EVALUATION continued	40	Head Restraint Type/Damage by Occupant 3
44	Source of Air Bag Damage	45.	at This Occupant Position
	(00) Not equipped/not available		(0) No head restraints
	(O1) Not damaged		(1) Integral—no damage
	(O2) Object worn by occupant, (specify):	ļ	(2) Integral—damaged during accident
	(and the second by accument (angely):		(3) Adjustable—no damage
	(03) Object carried by occupant, (specify):		(4) Adjustable—damaged during accident (5) Add-on—no damage
	(04) Adaptive/assistive controls, (specify):		(6) Add-on—damaged during accident
	(04) Adaptive/assistive controls, (apacity).	l	(8) Other (specify):
	(05) Fire in vehicle		(6) 6(:16: (6)66:17)
	(06) Thermal burns	1	(9) Unknown
	(07) Rescue or emergency efforts	1	
	(88) Other damage source (specify): BRACKET SCREWS	50.	. Seat Type (this Occupant Position)
	(95) Damaged, unknown source	l	(00) Occupant not seated or no seat (01) Bucket
	(96) Deployed, unknown if damaged		(02) Bucket with folding back
	(97) Not deployed	l	(03) Bench
	(98) Unknown if deployed		(O4) Bench with separate back cushions
	(99) Unknown	İ	(05) Bench with folding back(s)
	1		(06) Split bench with separate back cushions
45	Was The Air Bag Tethered?	1	(07) Split bench with folding back(s)
→ J.	(0) Not equipped/not available	1	(08) Pedestal (i.e., column supported)
	(1) No	1	(09) Box mounted seat (i.e., van type) (10) Other seat type (specify):
	(2) Yes (specify number of tether straps):		(10) Other sear type (specify).
	(O) Deleved velegons if each and	1	(99) Unknown
	(3) Deployed, unknown if tethered (7) Not deployed		
	(8) Unknown if deployed	51	. Seat Orientation (this Occupant Position)
	(9) Unknown	i	(O) Occupant not seated or no seat
	7		(1) Forward facing seat
46.	Did The Air Bag Have Vent Ports? (O) Not equipped/not available		(2) Rear facing seat (3) Side facing seat (inward)
	(1) No	}	(4) Side facing seat (outward)
	(2) Yes (specify number of vent ports):		(8) Other (specify):
	\mathcal{A}	1	
	(3) Deployed, unknown if vent ports present		(9) Unknown
	(7) Not deployed		2. Seat Track Adjusted Position Prior To Impact
	(8) Unknown if deployed	122	(0) Occupant not seated or no seat
	(9) Unknown	ł	(1) Non-adjustable seat track
47	Was the Air Bag in this Occupant's Position	1	
•••	Contacted by Another Occupant?		Adjustable Seat Track
	(0) Not equipped/not available		(2) Seat at forward most track position
	(1) No		(3) Seat between forward most and middle track
	(2) Yes (specify):	1	positions (4) Seet at middle track position
l	(3) Deployed, unknown if other occupant contact		(4) Seat at middle track position (5) Seat between middle and rear most track
	to air bag		positions
	(7) Not deployed		(6) Seat at rear most track position
l	(8) Unknown if deployed	1	(9) Unknown
	(9) Unknown	1	
		1	
48.	Was This Occupant Wearing Eye-wear?	ı	
	(0) Not equipped/not available		
	(1) No (2) Eyeglasses sunglasses	1	·
l	(2) Eyegiasses(sunglasses) (3) Contact lenses	1	
	(4) Deployed, unknown if eyewear worn	1	
	(7) Not deployed	-	
1	(8) Unknown if deployed		
	(9) Unknown		

	HEAD RESTRAINT AND SE	AT EVALUATION continued
53.	Seat Back Incline Prior and Post Impact (00) Occupant not seated or no seat (01) Not adjustable	
	Upright prior to impact (11) Moved to completely rearward position (12) Moved to rearward midrange position (13) Moved to slightly rearward position (14) Retained pre-impact position (15) Moved to slightly forward position (16) Moved to forward midrange position (17) Moved to completely forward position	15 14
	Slightly reclined prior to impact (21) Moved to completely rearward position (22) Moved to rearward midrange position (23) Retained pre-impact position (24) Moved to upright position (25) Moved to slightly forward position (26) Moved to forward midrange position (27) Moved to completely forward position	25 ²⁴ 26 27
	Completely reclined prior to impact (31) Retained pre-impact position (32) Moved to rearward midrange position (33) Moved to slightly rearward position (34) Moved to upright position (35) Moved to slightly forward position (36) Moved to forward midrange position (37) Moved to completely forward position	35 34 36 37
	(99) Unknown	
54.	Seat Performance (this Occupant Position) (0) Occupant not seated or no seat (1) No seat performance failure(s) (2) Seat adjusters failed (3) Seat back folding locks or "seat back" failed (specify):	
	 (4) Seat track/anchors failed (5) Deformed by impact of occupant (6) Deformed by passenger compartment intrusion, (specify): 	
	(7) Combination of above (specify):	
	(8) Other (specify):(9) Unknown	·







	C	HILD SAF	ETY	SEAT				
55.	(000) No child safety seat	00	58.	Child Safet	y Seat Harness Usage	00		
	Applicable codes are found in your NASS Data Collection, Coding and Editing (950) Built-in child safety seat	CDS	59.	Child Safet	y Seat Shield Usage	00		
	(997) Other make/model (specify): (998) Unknown make/model	_	60.	Child Safet	y Seat Tether Usage	<u>00</u>		
	(999) Unknown if child safety seat used		١ ١	Variables O	ons below applicable to 0A58-0A60. hild safety seat			
56.	Type of Child Safety Seat	<u> </u>			•			
	(0) No child safety seat (1) Infant seat			(01) After	ot Designed With Harness/Shield/Tether 1) After market harness/shield/tether			
	(2) Toddler seat (3) Convertible seat				d, not used market harness/shield/te	ther used		
	(4) Booster seat - with shield				safety seat used, but no	after market		
	(5) Booster seat - without shield(7) Other type child safety seat (specify):	: -		(09) Unkn	ess/shield/tether added own if harness/shield/tet d or used	her		
	(8) Unknown child safety seat type(9) Unknown if child safety seat used			(11) Harne	With Harness/Shield/Tethess/shield/tether not used			
57.	Child Safety Seat Orientation (00) No child safety seat	<u></u> △ △ /eight	;	(19) Unkno	ess/shield/tether used own if harness/shield/tet			
	Designed for Rear Facing for This Age/W(01) Rear facing (02) Forward facing (08) Other orientation (specify):			(21) Harne (22) Harne	nknown If Designed With Harness/Shield/Tether 1) Harness/shield/tether not used 2) Harness/shield/tether used 29) Unknown if harness/shield/tether used			
	(09) Unknown orientation			(99) Unkn	own if child safety seat (used		
	Designed For Forward Facing for This Ag	e/Weiaht						
	(11) Rear facing	. , .	İ					
	(12) Forward facing(18) Other orientation (specify):							
	(19) Unknown orientation				<i>:</i>			
	Unknown Design or Orientation For This Age/Weight, or Unknown Age/Weight (21) Rear facing (22) Forward facing (28) Other orientation (specify):							
	(29) Unknown orientation							
	(99) Unknown if child safety seat used							

1
63. Type Of Medical Facility (for Initial Treatment) (0) Not treated at a medical facility (1) Trauma center (2) Hospital (3) Medical clinic (4) Physician's office (5) Treatment later at medical facility (8) Other (specify): (9) Unknown
64. Hospital Stay (00) Not Hospitalized Code the number of days (up through 60) that the occupant stayed in hospital. (61) 61 days or more (99) Unknown 65. Working Days Lost Code the number of days (up through 60) that the occupant lost from work due to the accident
(00) No working days lost (61) 61 days or more (62) Fatally injured (97) Not working prior to accident (99) Unknown
ORK HERE
LES 66-74

TO BE CODED BY THE ZONE CENTER

TO BE CODED BY THE ZONE CENTER

INJURY CONSEQUENCES	TRAUMA DATA
Code number of hours from time of accident to time of death up through 24 hours. If time of death is greater than 24 hours, code number of days. (Note: 1 day = 31, 2 days = 32, n days = 30 + n up through 30 days = 60) (O0) Not fatal (96) Fatal - ruled disease (99) Unknown	71. Glasgow Coma Scale (GCS) Score (at Medical Facility) (00) Not injured (01) Injured - not treated at medical facility (02) No GCS Score at medical facility (03-15) Code the actual value of the initial GCS Score recorded at medical facility. (97) Injured, details unknown (99) Unknown if injured
67. 1st Medically Reported Cause of Death 68. 2nd Medically Reported Cause of Death Code the Occupant Injury from line number(s) for the medically reported injury(s) which reportedly contributed to this occupant's death (00) Not fatal or no additional causes (96) Mode of death given but specific injuries are not linked to cause of death. (specify):	72. Was the Occupant Given Blood? (1) No - blood not given (2) Yes - blood given (specify units): (9) Unknown if blood given 73. Arterial Blood Gases (ABG) – HCO ₃ (00) Not injured (01) Injured, ABGs not measured or reported (02-50) Code the actual value of the HCO ₃ (96) ABGs reported, HCO ₃ unknown (97) Injured, details unknown (99) Unknown if injured
(97) Other result (includes fatal ruled disease) (specify): (99) Unknown 70. Number of Recorded Injuries for This Occupant Code the actual number of injuries recorded for this occupant. (00) No recorded injuries (97) Injured, details unknown (99) Unknown if injured	BELT USE DETERMINATION 74. Primary Source of Belt Use Determination (0) Not equipped/not available/destroyed or rendered inoperative (1) Vehicle inspection (2) Official injury data (3) Driver/occupant interview (8) Other (specify):

Appendix K:

NASS CDS OCCUPANT INJURY FORM:

CASE VEHICLE RIGHT FRONT PASSENGER



Administration

U.S. Department of Transportation National Highway Traffic Safety

OCCUPANT INJURY FORM

Form Approved O.M.B. No. 2127-0021

NATIONAL ACCIDENT SAMPLING SYSTEM CRASHWORTHINESS DATA SYSTEM

1.	Primary	Sampling	Unit	Number

10

3. Vehicle Number

0 /

2. Case Number - Stratum

9517

4. Occupant Number

02

INJURY DATA

Record below the actual injuries sustained by this occupant that were identified from the official and unofficial data sources. Remember not to double count an injury just because it was identified from two different sources. If greater than ten injuries have been documented, encode the balance on the Occupant Injury Supplement.

	Source of Injury Data	Body Region	Type of Anatomic Structure	Anatomic	Level of	A.I.S. Severity	Aspect	Injury Source	Injury Source Confidence Level	Direct/ e Indirect Injury	
head	5. <u>7</u>	6. <u> </u>	7. <u>9</u>	в. <u>О</u> <u>2</u>	9. <u>0 2</u>	10	11. 7	12. <u>00</u> /	13/	14	15. <u>O</u>
eration 2nd or 2nd or 71 nger	7 16. <u>7</u>	17. 7	18. <u>9</u>	19. 0 6	20	21	22. 2	23. <u>00</u> /	_{24.} <u>2</u>	25/	_{26.} <u>O</u> <u>C</u>
3rd	27	28	29 :	30	31	32	33	34	35	36	37
4th	38	39	40 4	11	42	43	44	45.	46	47. <u></u>	48
5th	49	50 !	51	52	53	54	55	56.	57	58	59
6th	60	61	62. <u> </u>	53. <u> </u>	64	65	66	67.	68	69	70
7th	71	72. 7	73 7	74	75	76	77	78.	79	BO. <u> </u>	81
8th	82	83 6	34 8	35	86	87	88 8	39	90	91	92
9th	93	94 \$	95 9	06	97	98	99 10	00	101 10	02 11	03
10th 1	04 1	05 10	06 10	07	108	109 1	10 11	11	112 1	13 1	14

				OCCU	PANT	NJURY	DATA				
	Source of Injury Data	Body Region	Type of Anatomic Structure	A.I.S 90 Specific Anatomic Structure	Level of Injury	A.I.S. Severity	Aspect	Injury Source	Injury Source Confidence Level	Direct/ Indirect Injury	Occupant Area Intrusion Number
11th						_				<u></u>	
12th										 .	
13th						_				_	
14th	_									_	
15th	_					_					
16th									_		
17th					 -						
18th									· —		
19th								-			
20th		******							-		
21st		**********									<u> </u>
22nd							_				
23rd		_							-		
24th											
25th			· —								

OCCUPANT INJURY CLASSIFICATION **Body Region** Specific Anatomic Level of Injury Aspect Structure Head Specific injuries are Right (1)Left Face assigned consecutive (2)(2)(3)Neck Vessels, Nerves, Organs. two-digit numbers (3)Bilateral Central (4)Thorax Bones, Joints are assigned beginning with 02. (4)(5) Abdomen consecutive two digit (5) Anterior (6)Spine numbers beginning with To the extent possible, (6)**Posterior** (7)**Upper Extremity** (7)Superior 02. within the organizational Lower Extremity framework of the AIS, 00 (8) (8) Inferior (9) Unspecified The exceptions to this rule is assigned to an injury (9) Unknown NFS as to severity or (0) apply to: Whole region where only one injury is Type of Anatomic Whole Area given in the dictionary for (02) Skin - Abrasion Structure that anatomic structure. (04) Skin - Contusion 99 is assigned to any Whole Area (06) Skin - Laceration injury NFS as to lesion or (1)(2) Vessels (08) Skin - Avulsion severity. (10) Amputation (3) Nerves (4) Organs (includes (20) Burn Abbreviated Injury Scale Muscles/ligaments) (30) Crush (5) Skeletal (includes (40) Degloving Minor Injury ioints) (50) Injury - NFS (2) Moderate Injury Serious Injury (6)Head - LOC (90)Trauma, other than (3)(9) Skin mechanical (4)Severe Injury (5) Critical Injury Head - LOC (6)Maximum (02) Length of LOC (untreatable) (7)Injured, unknown (04) Level severity (06) of (08) Consciousness

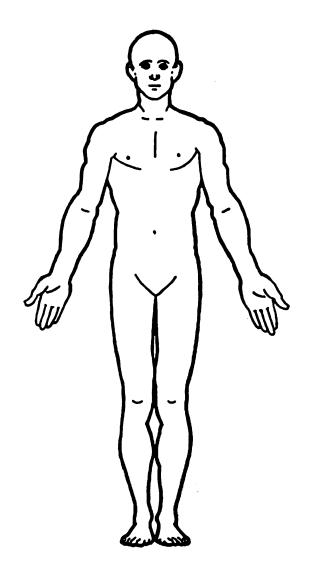
(10) Concussion

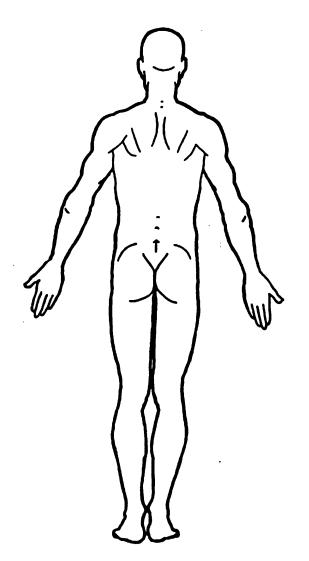
(02) Cervical (04) Thoracic (06) Lumbar

Spine

(9) Police

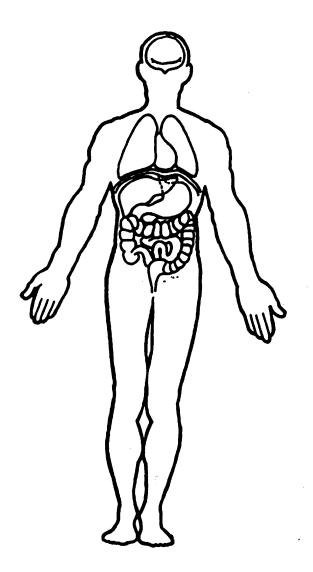
SOURCE OF INJURY DATA INJURY SOURCE DIRECT/INDIRECT INJURY CONFIDENCE LEVEL OFFICIAL RECORDS (1) Autopsy records with or (1) Certain (1) Direct contact injury without hospital/medical (2) Probable (2) Indirect contact injury records (3) Possible (3) Noncontact injury (2) Hospital/medical records other (9) Unknown Injured, unknown source than emergency room (e.g., discharge summary) (3) Emergency room records only (including associated X-rays or other lab reports) (4) Private physician, walk-in or emergency clinic **UNOFFICIAL RECORDS** (5) Lay coroner report (6) E.M.S. personnel (7) Interviewee (8) Other source (specify):

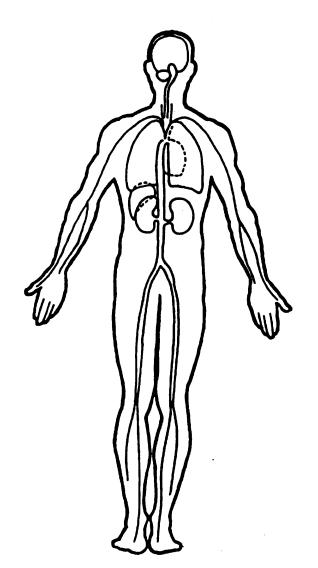




	OFFICIAL INJURY DA	ATA — SKELETAL INJURIES
Restrained? No Yes	Indicate the Location, Specific Anatomic Structure, Detail (size,	depth, fracture type, head injury clinical signs and neurological deficits), and or other unofficial sources if medical records and interviewee data are
Blood Alcohol Level (mg/dl) BAL =	body	
Glasgow Coma Scale Score GCSS =		
Units of Blood Given Units =		
Arterial Blood Gases pH = PO ₂ =		
PCO,		

			INJURY	sou	RCES		
	•	(102)	Diebe eide bestumm	4100	1 Air b		
FRON		(102)	Right side hardware or	(183	Air bag-passenger side and	(411) Wall mounted head rest
1	Windshield Mirror	(103)	armrest Right A (A1/A2)-pillar	/194	object held Air bag-passenger side and	1412	(used behind wheel chair)) Other adaptive device
	Sunvisor		Right B-pillar	(104)	object in mouth	(412	
	Steering wheel rim		Other right pillar (specify):	(185	Air bag compartment		(specify):
1	Steering wheel hub/spoke	(100)	Ctrici right piner (specify).	,,,,,,	cover-passenger side		
l .	Steering wheel (combination	(106)	Right side window glass	(186)	Air bag compartment	FXT	ERIOR of OCCUPANT'S
	of codes 004 and 005)		Right side window frame	(1.00)	cover-passenger side and	VEHI	_
(007)	Steering column,		Right side window sill		eyewear) Hood
' '	transmission selector lever,		Right side window glass	(187)	Air bag compartment		Outside hardware (e.g.,
-	other attachment		including one or more of the		cover-passenger side and	,	outside mirror, antenna)
(008)	Cellular telephone or CB		following: frame, window		jewelry	(453	Other exterior surface or
	radio		sitl, A (A1/A2)-pillar, B-pillar,	(188)	Air bag compartment		tires (specify):
(009)	Add on equipment (e.g.,		or roof side rail.		cover-passenger side and		
ł	tape deck, air conditioner)	(110)	Other right side object		object held		
(010)	Left instrument panel and		(specify):	(189)	Air bag compartment	(454)	Unknown exterior objects
1	below				cover-passenger side and		•
(011)	Center instrument panel and				object in mouth	EXTE	RIOR OF OTHER MOTOR
	below	INTER	NOR	(190)	Other air bag (specify)	VEHI	CLE
(012)	Right instrument panel and	(151)	Seat, back support			(501)	Front bumper
l	below	(152)	Belt restraint	(195)	Other air bag compartment	(502)	Hood edge
(013)	Glove compartment door		webbing/buckle		cover (specify)	(503)	Other front of vehicle
(014)	Knee bolster	(153)	Belt restraint B-pillar or door				(specify):
(015)	Windshield including one or		frame attachment point				
	more of the following: front	(154)	Other restraint system	ROOF		(504)	Hood
	header, A (A1/A2)-pillar,		component (specify):	(201)	Front header	(505)	Hood ornament
İ	instrument panel, mirror, or			(202)	Rear header	(506)	Windshield, roof rail, A-pillar
1	steering assembly (driver	(155)	Head restraint system	(203)	Roof left side rail	(507)	Side surface
1	side only)	(160)	Other occupants (specify):	(204)	Roof right side rail	(508)	Side mirrors
(016)	Windshield including one or			(205)	Roof or convertible top	(509)	Other side protrusions
	more of the following: front	(161)	Interior loose objects				(specify):
	header, A (A1/A2)-pillar,	(162)	Child safety seat (specify):	FLOO	R		
	instrument panel, or mirror			(251)	Floor (including toe pan)	(510)	Rear surface
	(passenger side only)	(163)	Other interior object	(252)	Floor or console mounted	(511)	Undercarriage
(017)	Windshield reinforced by		(specify):		transmission lever, including	(512)	Tires and wheels
	exterior object (specify)				console	(513)	Other exterior of other
				(253)	Parking brake handle		motor vehicle (specify):
(019)	Other front object (specify):	AIR BA		(254)	Foot controls including		
			Air bag-driver side		parking brake		
		(171)	Air bag-driver side and			(514)	Unknown exterior of other
LEFT S			eyewear	REAR			motor vehicle
(051)	Left side interior surface,	(172)	Air bag-driver side and		Backlight (rear window)		
	excluding hardware or	44.70	jewelry	(302)	Backlight storage rack,		R VEHICLE OR OBJECT IN
****	armrests	(173)	Air bag-driver side and		door, etc.		NVIRONMENT
(052)	Left side hardware or		object held	(303)	Other rear object (specify):		Ground
1050	armrest	(174)	Air bag-driver side and	-		(598)	Other vehicle or object
	Left A (A1/A2)-pillar	/4751	object in mouth	454~	THIP 14 00 10 THE TOTAL TH		(specify):
	Left B-piller	(1/5)	Air bag compartment		TIVE (ASSISTIVE) DRIVING		
(((55)	Other left pillar (specify):	(170	cover-driver side	EQUIP		(599)	Unknown vehicle or object
IDEEL	l efe eide window et	(1/6)	Air bag compartment	(401)	Hand controls for	A	· · · · · · · · · · · · · · · · · · ·
	Left side window glass Left side window frame		cover-driver side and	4600	braking/acceleration		ONTACT INJURY
		(177)	eyewear Air ban company	(402)	Steering control devices		Fire in vehicle
	Left side window sill Left side window glass	(177)	Air bag compartment		(attached to OEM steering		Flying glass
		/1701	cover-driver side and jewelry	1400	wheel)	(603)	Other noncontact injury
	including one or more of the	(1/8)	Air bag compartment	(403)	Steering knob attached to		source
	following: frame, window sill, A (A1/A2)-pillar, B-pillar,		cover-driver side and object	1405	Steering wheel		(specify):
	or roof side rail.	(170)	held	(405)	Replacement steering wheel		Air bag exhaust gases
	or roor side rail. Other left side object	(179)	Air bag compartment	1400	(i.e., reduced diameter)	(697)	Injured, unknown source
			cover-driver side and object		Joy stick steering controls		
	(specify):	(190)	in mouth		Wheelchair tie-downs		
			Air bag-passenger side	(408)	Modification to seat belts,		
RIGHT	SIDE	(101)	Air bag-passenger side and	1400	(specify):		
	Right side interior surface,	/1921	eyewear	(409)	Additional or relocated		
	excluding hardware or	(102)	Air bag-passenger side and		switches, (specify):		
	armrests		jewelry	(410)	Baised roof		
				(410)	Raised roof		
			 				





		CAUSE OF DEATH						
		ICD·9·CM						
		OTHER DRUGS (GV16)						
pecir	nen Test Type	Drug(s)	Drug Type					
	od and urine tests							
	od test only ne test only							
Oth	er test							
Uns	pecified							
		Medical Record Abbreviations						
abol		Record Type Description						
A E	Medical examiner's recor	ation based upon an invasive examination of a body d—where the information reported on the patient is based on a non-	invasive examination of the body					
R	Admission record/summer patient's admission; these	ry—any medical information on this record should be considered as records are common in short hospitalizations and usually only cont	post-ER since it summarizes the ain: admission DX(s), final DX(s),					
PS	and a listing of surgical t	reatments; ICD-9-CM codes are frequently available. sheet—face sheets are essentially the same as admission record/sumr						
	information as discussed							
S	written from the perspec	ive of its author which in many cases is a consultant						
8	Operative record—summer tients who survive the su	ry of a performed surgical operation often providing detailed inform gery are normally admitted; thus, this record is normally considered	nation about a specific trauma; pa- d post-ER; however, if this record					
x	results from an outpatier	t surgery, then treat it as emergency-room related	•					
N	Radiographic records—taken after the patient has been admitted, or while in surgery or intensive care Patient progress notes—supplemental record containing additional nurses notes taken after the patient's admission							
	History and physical exam-medical history and the results of the physical exam obtained by the emergency room physician assigned to the patient upon arrival at the emergency room							
N	Consultation record—consultations are in essence additional history and physicial exams performed by doctors whose expertise was requested by the emergency room physician; the consultation may occur during the emergency room visit or after admission							
R	Emergency room report—where the author of this information is undefined							
N D	Emergency room nurse-"nurse/complaint of" section on the emergency room report Emergency room doctor"objective/physical exam" section plus "diagnosis and treatment" sections (i.e., doctor portion of emer-							
ī	gency room report) Nurse notes—supplements	I record containing additional notes taken by the emergency room n	urse(s)					
X	Radiographic records-ta	cen during the patients stay in the emergency room						
CV Coroner's verdict-statement of cause of death for legal specific regarding injuries; care must be exercised to ascertain the creden-								
	tials of the verdict's author.							
v R	Coroner's report-medica has the title of a coroner		person who is not a doctor but who					

Appendix L:

NASS CDS OCCUPANT ASSESSMENT FORM:

CASE VEHICLE RIGHT REAR PASSENGER



OCCUPANT ASSESSMENT FORM

Form Approved 21

U.S. Department of Transportation National Highway Traffic Safety	UCCUPANT ASS	DESSIVIEN I FURIVI 0.M.B. No. NATIONAL ACCIDENT SAMPL	
Administration		CRASHWORTHINESS DA	TA SYSTE
1. Primary Sampling Unit Number	er <u>/ O</u>		7 2
2. Case Number - Stratum	9517	Front Seat	23
3. Vehicle Number	01	(11) Left side (12) Middle	
4. Occupant Number	03	(13) Right side	
		(14) Other (specify):	_
OCCUPANT'S CHARA	CTERISTICS	(15) On or in the lap of another occupant	
5. Occupant's Age Code actual age at time of ac (00) Less than one year old (Second Seat (21) Left side (22) Middle (23) Right side	
(97) 97 years and older		(24) Other (specify):	-
(99) Unknown		(25) On or in the lap of another occupant	
6. Occupant's Sex (1) Male (2) Female-not reported preg; (3) Female-pregnant-1st trim; (4) Female-pregnant-2nd trim; (5) Female-pregnant-3rd trim; (6) Female-pregnant-term unit; (9) Unknown	ester(1st-3rd month) nester(4th-6th month) ester(7th-9th month) known	Third Seat (31) Left side (32) Middle (33) Right side (34) Other (specify): (35) On or in the lap of another occupant Fourth Seat (41) Left side (42) Middle (43) Right side (44) Other (specify): (45) On or in the lap of another occupant	
7. Occupant's Height Code actual height to the nea centimeter. (999) Unknown 6 2 inches x 2.54 = 157		(97) In or on unenclosed area (98) Other seat (specify): (99) Unknown	П
8. Occupant's Weight Code actual weight to the neakilogram. (999)Unknown 130 pounds x .4536 = 9. Occupant's Role (1) Driver (2) Passenger (9) Unknown		11. Occupant's Posture (0) Normal posture Abnormal posture (1) Kneeling or standing on seat (2) Lying on or across seat (3) Kneeling, standing or sitting in front of (4) Sitting sideways or turned to talk with a occupant or to look out a rear window (5) Sitting on a console (6) Lying back in a reclined seat position (7) Bracing with feet or hands on a surface of seat (8) Other abnormal posture (specify):	another
		(9) Unknown	

	EJEC	TION/E	NTRAPMENT
12. Ejection (0) No ejection (1) Complete e (2) Partial eject (3) Ejection, un (9) Unknown	ection ion	0	15. Medium Status (Immediately Prior To Impact) (0) No ejection (1) Open (2) Closed (3) Integral structure (9) Unknown 16. Entrapment (0) Not entrapped/exit not inhibited
(0) No ejection (1) Windshield (2) Left front (3) Right front (4) Left rear (5) Right rear (6) Rear (7) Roof (8) Other area (specify): (9) Unknown	(e.g., back of pickup, etc.)		(1) Entrapped/pinned - mechanically restrained (2) Could not exit vehicle due to jammed doors, fire, etc. (specify):
14. Ejection Mediur (0) No ejection (1) Door/hatch (2) Nonfixed ro (3) Fixed glazir (4) Nonfixed gl (5) Integral stru (8) Other medi	/tailgate oof structure ng lazing (specify): ucture	<u></u>	 (2) Removed from vehicle due to injuries (3) Exited vehicle with some assistance (4) Exited vehicle under own power (5) Occupant fully ejected (9) Unknown
(3) Chilliann			

BELT SYSTEM	N FUNCTION
18. Manual (Active) Belt System Availability (0) None available (1) Belt removed/destroyed (2) Shoulder belt (3) Lap belt (4) Lap and shoulder belt (5) Belt available—type unknown Integral Belt Partially Destroyed (6) Shoulder belt (lap belt destroyed/removed) (7) Lap belt (shoulder belt destroyed/removed)	22. Shoulder Belt Upper Anchorage Adjustment (0) No shoulder belt (1) No upper anchorage adjustment for shoulder belt Adjustable shoulder Belt Upper Anchorage (2) In full up position (3) In mid position (4) In full down position (5) Position unknown (9) Unknown if position has adjustable upper anchorage adjustment
(8) Other belt (specify): (9) Unknown 19. Manual (Active) Belt System Use (00) None used, not available, or belt removed/destroyed (01) Inoperative (specify): (02) Shoulder belt (03) Lap belt (04) Lap and shoulder belt (05) Belt used—type unknown (08) Other belt used (specify):	23. Automatic (Passive) Belt System Availability/ Function (0) Not equipped/not available (1) 2 point automatic belts (2) 3 point automatic belts (3) Automatic belts - type unknown Non-functional (4) Automatic belts destroyed or rendered inoperative (9) Unknown 24. Automatic (Passive) Belt System Use (0) Not equipped/not available/destroyed or rendered inoperative
(12) Shoulder belt used with child safety seat (13) Lap belt used with child safety seat (14) Lap and shoulder belt used with child safety seat (15) Belt used with child safety seat—type unknown (18) Other belt used with child safety seat (specify): (99) Unknown if belt used 20. Proper Use of Manual (Active) Belts (0) None used or not available (1) Belt used properly (2) Belt used properly with child safety seat	(1) Automatic belt in use (2) Automatic belt not in use (manually disconnected, motorized track inoperative) (specify): (3) Automatic belt use unknown (9) Unknown 25. Automatic (Passive) Belt System Type (0) Not equipped/not available (1) Non-motorized system (2) Motorized system (9) Unknown 26. Proper Use of Automatic (Passive) Belt System (0) Not equipped/not available/not used
Belt Used Improperly (3) Shoulder belt worn under arm (4) Shoulder belt worn behind back or seat (5) Belt worn around more than one person (6) Lap belt worn on abdomen (7) Lap belt or lap and shoulder belt used improperly with child safety seat (specify): (8) Other improper use of manual belt system (specify): (9) Unknown 21. Manual (Active) Belt Failure Modes During Accident	(1) Automatic belt used properly (2) Automatic belt used properly with child safety seat Automatic Belt Used Improperly (3) Automatic shoulder belt worn under arm (4) Automatic shoulder belt worn behind back (5) Automatic belt worn around more than one person (6) Lap portion of automatic belt worn on abdomen (7) Automatic lap and shoulder belt or automatic shoulder belt used improperly with child safety seat (specify): (8) Other improper use of automatic belt system
(0) No manual belt used or not available (1) No manual belt failure(s) (2) Torn webbing (stretched webbing not included) (3) Broken buckle or latchplate (4) Upper anchorage separated (5) Other anchorage separated (specify): (6) Broken retractor (7) Combination of above (specify): (8) Other manual belt failure (specify):	(specify): (9) Unknown 27. Automatic (Passive) Belt Failure Modes During Accident (0) Not equipped/not available/not in use (1) No automatic belt failure(s) (2) Torn webbing (stretched webbing not included) (3) Broken buckle or latchplate (4) Upper anchorage separated (5) Other anchorage separated (specify): (6) Broken retractor (7) Combination of above (specify): (8) Other automatic belt failure (specify):

POLICE REPORTED RESTRAINT USE	AIR BAG SYSTEM FUNCTION
28. Police Reported Belt Use (0) None used (1) Police did not indicate belt use (2) Shoulder belt (3) Lap belt (4) Lap and shoulder belt (5) Belt used, type not specified (6) Child safety seat (7) Automatic belt (8) Other type belt, (specify): (9) Police indicated "unknown" 29. Police Reported Air Bag Availability/Function (0) No air bag available (1) Police did not indicate air bag availability/function (2) Deployed (3) Not deployed (4) Unknown if deployed (9) Police indicated "unknown"	30. Frontal Air Bag System Availability/Function (This Occupant Position) (0) Not equipped/not available (1) Air bag Non-functional (2) Air bag disconnected (specify): (3) Air bag not reinstalled (9) Unknown 31. Frontal Air Bag System Deployment (This Occupant Position) (0) Not equipped/not available (1) Deployed during accident (as a result of impact) (2) Deployed inadvertently just prior to accident (3) Deployed, details unknown (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical) (5) Unknown if deployed (7) Nondeployed
Check the Primary Source Used In Determining Belt Use. [] Not equipped/not available/destroyed or rendered inoperative [] Vehicle inspection [] Official injury data [X Driver/occupant interview [Other (specify): [] Unknown if belt used	(9) Unknown 32. Other Than First Seat Frontal Air Bag Availability/Function (This Occupant Position) (0) Not equipped/not available (1) Air bag Non-functional (2) Air bag disconnected (specify): (3) Air bag not reinstalled (9) Unknown Specify type of "other" air bag present:
	33. Air Bag(s) Deployment, Other Than First Seat Frontal (This Occupant Position) (0) Not equipped with an "other" air bag (1) Deployed during accident (as a result of impact) (2) Deployed inadvertently just prior to accident (3) Deployed, details unknown (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical) (5) Unknown if deployed (7) Nondeployed (9) Unknown 34. Are There Indications of Air Bag System Failure? (This Occupant Position) (0) Not equipped/not available (1) No (2) Yes (specify):

FIRST SEAT FRONTAL AIR BAG SYSTEM EVALUATION					
35. Had Vehicle Been in Previous Accident(s)? (0) Not equipped/not available (1) No previous accidents Yes (2) Previous accident(s) without deployment(s) (3) One previous accident with deployment (4) More than one previous accident with at least one deployment (8) Previous accidents, unknown deployment status (9) Unknown	40. Longitudinal Component of + Delta V For Air Bag - OOO Deployment Impact (000) Not equipped/not available Code the value of the delta V for the impact that initiated the air bag deployment (996) Deployment, unknown longitudinal Delta V (997) Not deployed (998) Unknown if deployed (999) Unknown				
36. Type of Air Bag (0) Not equipped/not available (1) Original manufacturer installed system (2) Retrofitted air bag (3) Replacement air bag (8) Unknown type of air bag (9) Unknown	41. Did Air Bag Module Cover Flap(s) Open At Designated Tear Points? (0) Not equipped/not available (1) No (2) Yes (3) Deployed, unknown if flap(s) opened at designated tear points (7) Not deployed (8) Unknown if deployed				
37. Had Any Prior Maintenance/Service Been Performed On This Air Bag System? (0) Not equipped/not available (1) No prior maintenance (2) Yes, prior maintenance (specify): (9) Unknown 38. Air Bag Deployment Accident Event Sequence Number	(9) Unknown 42. Were Air Bag Module Cover Flap(s) Damaged? (0) Not equipped/not available (1) No (2) Yes (specify): (3) Deployed, unknown if air bag module cover flap(s) damaged (7) Not deployed (8) Unknown if deployed (9) Unknown				
(00) Not equipped/not available Code the accident event sequence number that initiated the air bag deployment (96) Deployed, unknown event (97) Not deployed (98) Unknown if deployed (99) Unknown 39. CDC For Air Bag Deployment Impact (0) Not equipped/not available (1) Highest delta V (2) Second highest delta V (3) Other non-coded delta V (specify): (6) Deployed, unknown event (7) Not deployed (8) Unknown if deployed (9) Unknown	43. Was There Damage To The Air Bag? (00) Not equipped/not available (01) Not damaged Yes - Air Bag Damage (02) Ruptured (03) Cut (04) Torn (05) Holed (06) Burned (07) Abraded (08) Other damage (specify): (95) Damaged, details unknown (96) Deployed, unknown if damaged (97) Not deployed (98) Unknown if deployed (99) Unknown				

	FIRST SEAT FRONTAL AIR BAG SYSTEM	HE	EAD RESTRAINT AND SEAT EVALUATION
	EVALUATION continued		2
	Source of Air Bag Damage	49.	. Head Restraint Type/Damage by Occupant
44.	Source of Air Bag Damage (00) Not equipped/not available		(0) No head restraints
	(O1) Not damaged		(1) Integral—no damage
	(02) Object worn by occupant, (specify):	1	(2) Integral—damaged during accident
	•		(3) Adjustable—no damage
	(03) Object carried by occupant, (specify):	ļ	(4) Adjustable—damaged during accident
		İ	(5) Add-on—no damage
	(04) Adaptive/assistive controls, (specify):		(6) Add-on-damaged during accident (8) Other (specify):
	(05) Fire in vehicle	1	(b) Other (specify).
	(06) Thermal burns		(9) Unknown
	(07) Rescue or emergency efforts	1	x 2
İ	(88) Other damage source (specify):	50.	. Seat Type (this Occupant Position) $\underline{\mathcal{D}} \underline{\mathcal{J}}$
		l	(00) Occupant not seated or no seat
	(95) Damaged, unknown source	ļ	(01) Bucket
	(96) Deployed, unknown if damaged (97) Not deployed		(02) Bucket with folding back
	(98) Unknown if deployed	1	(03) Bench (04) Bench with separate back cushions
	(99) Unknown		(05) Bench with folding back(s)
	(SS) Cimilistic		(06) Split bench with separate back cushions
4=	Was The Air Bag Tethered?		(07) Split bench with folding back(s)
45.	(0) Not equipped/not available	1	(08) Pedestal (i.e., column supported)
	(1) No	1	(09) Box mounted seat (i.e., van type)
	(2) Yes (specify number of tether straps):		(10) Other seat type (specify):
			(99) Unknown
	(3) Deployed, unknown if tethered	1	(99) Olikilowii
	(7) Not deployed	51	. Seat Orientation (this Occupant Position)
	(8) Unknown if deployed (9) Unknown		(0) Occupant not seated or no seat
		1	(1) Forward facing seat
46.	Did The Air Bag Have Vent Ports?		(2) Rear facing seat
ĺ	(0) Not equipped/not available		(3) Side facing seat (inward) (4) Side facing seat (outward)
	(1) No (2) Yes (specify number of vent ports):		(8) Other (specify):
	(2) Tes (specify fiditibel of Vent ports).		(8) Other (specify).
	(3) Deployed, unknown if vent ports present	1	(9) Unknown
1	(7) Not deployed	1	
1	(8) Unknown if deployed	52	2. Seat Track Adjusted Position Prior To Impact
	(9) Unknown		(1) Non-adjustable seat track
47	Was the Air Bag in this Occupant's Position	Į.	(1) Holl dajastasis seet trasic
ļ	Contacted by Another Occupant?	l	Adjustable Seat Track
	(O) Not equipped/not available	ļ	(2) Seat at forward most track position
	(1) No	ļ	(3) Seat between forward most and middle track
	(2) Yes (specify):	Ì	positions (4) Seat at middle track position
Ì	(3) Deployed, unknown if other occupant contact		(5) Seat between middle and rear most track
1	to air bag	1	positions
1	(7) Not deployed		(6) Seat at rear most track position
1	(8) Unknown if deployed	1	(9) Unknown
	(9) Unknown		
	Marin Summer		
48.	Was This Occupant Wearing Eye-wear? (0) Not equipped/not available	·	
	(1) No		
	(2) Eyeglasses/sunglasses		
1	(3) Contact lenses	1	
	(4) Deployed, unknown if eyewear worn		
	(7) Not deployed	1	
1	(8) Unknown if deployed	-	
1	(9) Unknown		

	HEAD RESTRAINT AND SEAT EVALUATION continued				
53.	Seat Back Incline Prior and Post Impact (00) Occupant not seated or no seat (01) Not adjustable				
	Upright prior to impact (11) Moved to completely rearward position (12) Moved to rearward midrange position (13) Moved to slightly rearward position (14) Retained pre-impact position (15) Moved to slightly forward position (16) Moved to forward midrange position (17) Moved to completely forward position	16 15 14 13 12			
	Slightly reclined prior to impact (21) Moved to completely rearward position (22) Moved to rearward midrange position (23) Retained pre-impact position (24) Moved to upright position (25) Moved to slightly forward position (26) Moved to forward midrange position (27) Moved to completely forward position	25 ²⁴ 23 22 21			
	Completely reclined prior to impact (31) Retained pre-impact position (32) Moved to rearward midrange position (33) Moved to slightly rearward position (34) Moved to upright position (35) Moved to slightly forward position (36) Moved to forward midrange position (37) Moved to completely forward position	35 34 33 36 31 31			
	(99) Unknown				
54.	Seat Performance (this Occupant Position) (0) Occupant not seated or no seat (1) No seat performance failure(s) (2) Seat adjusters failed (3) Seat back folding locks or "seat back" failed (specify): (4) Seat track/anchors failed (5) Deformed by impact of occupant (6) Deformed by passenger compartment intrusion, (specify):				
	(7) Combination of above (specify): (8) Other (specify):				
	,				

	СН	ILD SAF	ETY	SEA	T			
55.	Child Safety Seat Make/Model (000) No child safety seat	00	58.	Child	Safety	Seat Har	ness Usage	00
	Applicable codes are found in your NASS C Data Collection, Coding and Editing (950) Built-in child safety seat	DS	59.	Child	Safety	Seat Shie	eld Usage	<u>00</u>
	(997) Other make/model (specify):		60.	Child	Safety	Seat Teti	ner Usage	00
	(999) Unknown if child safety seat used			Variab	les OA	s below 8 58-0A60 d safety 9		
56.	Type of Child Safety Seat	0		,00,		<i></i>		
	(O) No child safety seat						rness/Shield/	
	(1) Infant seat						ness/shield/te	ther
	(2) Toddler seat					not used	ness/shield/te	ther used
	(3) Convertible seat (4) Booster seat - with shield	į						after market
	(5) Booster seat - without shield						ther added	
	(7) Other type child safety seat (specify):			, ,	Unknov added o		ess/shield/tet	her
	(8) Unknown child safety seat type (9) Unknown if child safety seat used			Decim	and Wit	th Harnes	s/Shield/Teth	er .
	(5) Unknown ii Child Salety Seat dised						ether not used	
		^ ^		,,			ether used	
57.	Child Safety Seat Orientation (00) No child safety seat	00					ess/shield/tet	
	Desired Ass. Base Feeling for This Ass. Miles						<i>With Harness</i> , ether not used	/Shield/Tether
	Designed for Rear Facing for This Age/Weig (01) Rear facing						ether not used	,
	(02) Forward facing						ess/shield/tet	her used
	(08) Other orientation (specify):			,,				
	(09) Unknown orientation			(99)	Unknov	vn if child	i safety seat u	sed
								•
	Designed For Forward Facing for This Age/	vveignt						
	(11) Rear facing (12) Forward facing						•	
	(18) Other orientation (specify):	,						
	(19) Unknown orientation							
		İ						
	Unknown Design or Orientation For This Age/Weight, or Unknown Age/Weight							
	(21) Rear facing							
	(22) Forward facing							
	(28) Other orientation (specify):							
	(20) Heleanin estation							
	(29) Unknown orientation							
	(99) Unknown if child safety seat used							
		j						
			ł					

National Accident Sampling System-Crashworthiness Da	nta System: Occupant Assessment Form Page
INJURY CONSEQUENCES	
61. Injury Severity (Police Rating) (0) O - No injury (1) C - Possible injury (2) B - Nonincapacitating injury (3) A - Incapacitating injury (4) K - Killed (5) U - Injury, severity unknown (6) Died prior to accident (9) Unknown	63. Type Of Medical Facility (for Initial Treatment) (0) Not treated at a medical facility (1) Trauma center (2) Hospital (3) Medical clinic (4) Physician's office (5) Treatment later at medical facility (8) Other (specify):
62. Treatment - Mortality (0) No treatment (1) Fatal (2) Fatal - ruled disease (specify):	64. Hospital Stay (00) Not Hospitalized Code the number of days (up through 60) that the occupant stayed in hospital. (61) 61 days or more (99) Unknown
Nonfatal (3) Hospitalization (4) Transported and released (5) Treatment at scene - nontransported (6) Treatment later (7) Treatment - other (specify): (8) Transported to a medical facility-unknown if treated (9) Unknown	65. Working Days Lost Code the number of days (up through 60) that the occupant lost from work due to the accident (00) No working days lost (61) 61 days or more (62) Fatally injured (97) Not working prior to accident (99) Unknown
STOP W	ORK HERE
VARIAB	LES 66-74
TO BE CODED BY	THE ZONE CENTER

TO BE CODED BY THE ZONE CENTER

INJURY CONSEQUENCES	TRAUMA DATA
Code number of hours from time of accident to time of death up through 24 hours. If time of death is greater than 24 hours, code number of days. (Note: 1 day = 31, 2 days = 32, n days = 30 +n up through 30 days = 60) (00) Not fatal (96) Fatal - ruled disease (99) Unknown	71. Glasgow Coma Scale (GCS) Score (at Medical Facility) (00) Not injured (01) Injured - not treated at medical facility (02) No GCS Score at medical facility (03-15) Code the actual value of the initial GCS Score recorded at medical facility. (97) Injured, details unknown (99) Unknown if injured
67. 1st Medically Reported Cause of Death 68. 2nd Medically Reported Cause of Death 69. 3rd Medically Reported Cause of Death Code the Occupant Injury from line number(s) for the medically reported	72. Was the Occupant Given Blood? (1) No - blood not given (2) Yes - blood given (specify units): (9) Unknown if blood given 73. Arterial Blood Gases (ABG) - HCO ₃ (00) Not injured
injury(s) which reportedly contributed to this occupant's death (OO) Not fatal or no additional causes (96) Mode of death given but specific injuries are not linked to cause of death. (specify):	(01) Injured (01) Injured, ABGs not measured or reported (02-50) Code the actual value of the HCO ₃ (96) ABGs reported, HCO ₃ unknown (97) Injured, details unknown (99) Unknown if injured
(97) Other result (includes fatal ruled disease) (specify):	BELT USE DETERMINATION
70. Number of Recorded Injuries for This Occupant Code the actual number of injuries recorded for this occupant. (00) No recorded injuries (97) Injured, details unknown (99) Unknown if injured	74. Primary Source of Belt Use Determination (0) Not equipped/not available/destroyed or rendered inoperative (1) Vehicle inspection (2) Official injury data (3) Driver/occupant interview (8) Other (specify): (9) Unknown if belt used

Appendix M:

NASS CDS OCCUPANT INJURY FORM:

CASE VEHICLE RIGHT REAR PASSENGER



Administration

U.S. Department of Transportation National Highway Traffic Safety

OCCUPANT INJURY FORM

Form Approved
O.M.B. No. 2127-0021

NATIONAL ACCIDENT SAMPLING SYSTEM CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number

10

3. Vehicle Number

0/

2. Case Number - Stratum

9517

4. Occupant Number

03

INJURY DATA

Record below the actual injuries sustained by this occupant that were identified from the official and unofficial data sources. Remember not to double count an injury just because it was identified from two different sources. If greater than ten injuries have been documented, encode the balance on the Occupant Injury Supplement.

	Source of Injury Data	Body Region	Type of Anatomic Structure	A.I.S Specific Anatomic Structure	90 Level of Injury	A.I.S. Severity	Aspect	Injury Source	Injury Source Confidence Level	Direct/ Indirect Injury	Occupan Area Intrusion Number
71.80 F	57	6. 8	7. 9	s. <u>0</u> <u>0</u>	9. <u>9 9</u>	10/	11. / 12.	101	133 1	4/	15. 00
2nd	16	17 1	8 19		20	21	22 23.	· · ·	242	Б :	26
3rd	27	28 2	19 30). <u> </u>	31	32	33 34.		35 3	6 :	37
4th	38	39 4	0 41	•	42	43	44 45		46 4	7	18
5th	49	50 5	1 52	·	53	54	55 56		57 5	8 8	59
6th	60	61 6	2 63	·	64	65	66 67		68 6	97	70
7th	71	72 7	3 74	· _ _	75	76	77 78		79 8	ο. <u></u> ε	31. <u> </u>
8th	82	83 8	4 85	· <u>—</u> —	86	87	88 89		90 9	l. <u> </u>	2
9th	93	94 9	5 96	· <u> </u>	97	98	99 100	1	01 10:	2 10	3
10th 1	04 1	05 10	6 107	1	08	109 1	10 111	1	12 11:	3 11	4

				occi	JPANT I	NJURY	DATA				
	Source of Injury Data	Body Region	Type of Anatomic Structure	A.I.S 90 Specific Anatomic Structure	Level of Injury	A.I.S. Severity	Aspect	Injury Source	Injury Source Confidence Level	Direct/ Indirect Injury	Occupant Area Intrusion Number
11th											
12th										- .	
13th	_									_	
14th	_		_						•	_	
15th				****** ·							
16th	- .								_	_	
17th									· <u></u>		
18th	_	_							1 1 1 m		
19th										.** 	
20th	_						_				
21st			_				_			_	
22nd		_					_		_	_	
23rd		_	_						· —	_	
24th									_		
25th			—			_			_		

-

OCCUPANT INJURY CLASSIFICATION

Body Region Head (2) Face (3)Neck Thorax (4)(5) Abdomen (6)Spine (7)**Upper Extremity** (8) Lower Extremity (9)Unspecified

Type of Anatomic Structure

- Whole Area (1) (2) Vessels (3) Nerves
- (4)Organs (includes Muscles/ligaments)
- (5)Skeletal (includes joints) (6)Head - LOC
- (9) Skin

Specific Anatomic Structure

Vessels, Nerves, Organs. Bones, Joints are assigned consecutive two digit numbers beginning with 02.

The exceptions to this rule apply to:

Whole Area (02) Skin - Abrasion (04) Skin - Contusion (06) Skin - Laceration (08) Skin - Avulsion (10) Amputation (20) Burn

- (30) Crush (40) Degloving (50)Injury - NFS
- (90) Trauma, other than mechanical

Head - LOC (02) Length of LOC

- (04) Level (06) of
- (08) Consciousness
- (10) Concussion

Spine

- (02)Cervical (04)Thoracic
- (06) Lumbar

Level of Injury

Specific injuries are assigned consecutive two-digit numbers beginning with 02.

To the extent possible, within the organizational framework of the AIS, 00 is assigned to an injury NFS as to severity or where only one injury is given in the dictionary for that anatomic structure. 99 is assigned to any injury NFS as to lesion or severity.

Abbreviated Injury Scale

- Minor Injury
- Moderate Injury (2) (3)Serious Injury
- (4) Severe Injury
- Critical Injury (5)
- (6)Maximum (untreatable)
- (7)Injured, unknown severity

Aspect

- (1)Right Left
- (2)(3) Bilateral
- (4)Central
- (5) Anterior
- (6)Posterior
- (7)Superior (8)Inferior
- (9) Unknown
- (O) Whole region

SOURCE OF INJURY DATA

OFFICIAL RECORDS

- (1) Autopsy records with or without hospital/medical records
- (2) Hospital/medical records other than emergency room (e.g., discharge summary)
- (3) Emergency room records only (including associated X-rays or other lab reports)
- (4) Private physician, walk-in or emergency clinic

UNOFFICIAL RECORDS

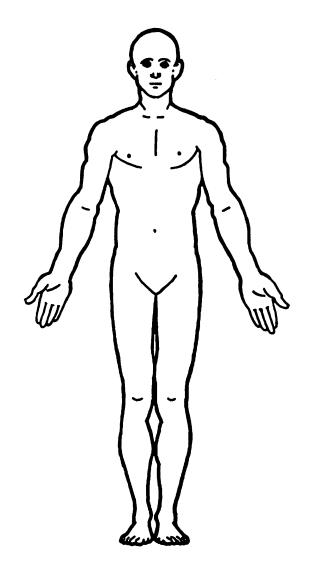
- (5) Lay coroner report
- (6) E.M.S. personnel
- (7) Interviewee
- (8) Other source (specify):
- (9) Police

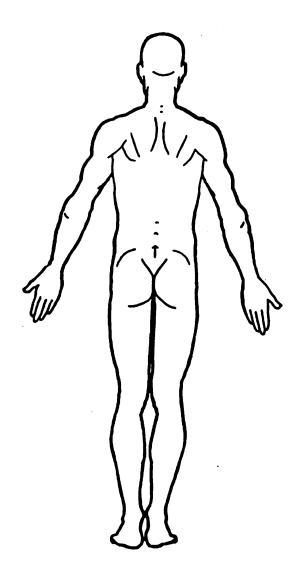
INJURY SOURCE DIRECT/INDIRECT INJURY

CONFIDENCE LEVEL

- (1) Certain
- (2) Probable (3) Possible
- (9) Unknown

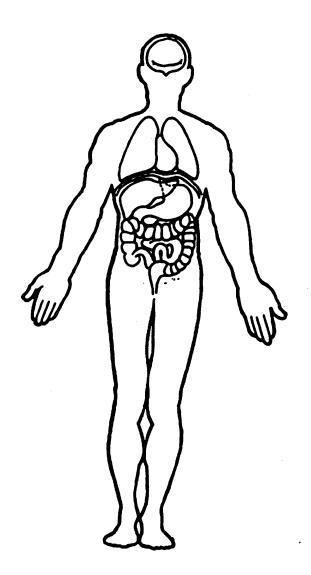
- Direct contact injury
- (2) Indirect contact injury
- Noncontact injury
- Injured, unknown source

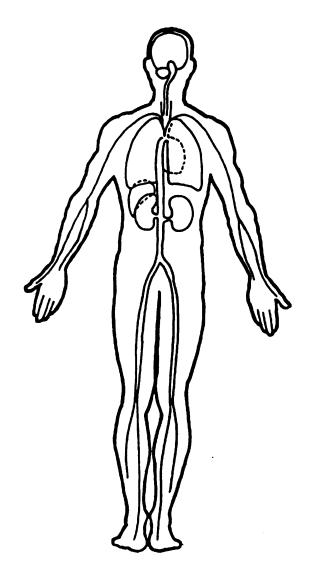




	OFFICIAL INJURY	DATA - SKELETAL INJURIES
Restrained? No Yes	Indicate the Location, Specific Anatomic Structure, Detail (si	ze, depth, fracture type, head injury clinical signs and neurological deficits), and AR or other unofficial sources if medical records and interviewee data are
Blood Alcohol Level (mg/dl) BAL =	boo o	
Glasgow Coma Scale Score GCSS =		
Units of Blood Given Units =		
Arterial Blood Gases pH = PO ₂ ==		
PCO ₂		

			INJURY	sou	RCES		
FRON	т	(102)	Right side hardware or	(183)	Air bag-passenger side and	(411) Wall mounted head rest
	Windshield	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	armrest	(100)	object held	,,,,,	(used behind wheel chair)
	Mirror	/1021	Right A (A1/A2)-pillar	(184)	Air bag-passenger side and	1412	Other adaptive device
			•	(104)	= =	(712	
	Sunvisor		Right B-pillar	44.05	object in mouth		(specify):
	Steering wheel rim	(105)	Other right pillar (specify):	(185)	Air bag compartment		
005)	Steering wheel hub/spoke				cover-passenger side		
006)	Steering wheel (combination	(106)	Right side window glass	(186)	Air bag compartment	EXTE	RIOR of OCCUPANT'S
	of codes 004 and 005)	(107)	Right side window frame		cover-passenger side and	VEHI	CLE
007)	Steering column,	(108)	Right side window sill		eyewear	(451)	Hood
	transmission selector lever,	(109)	Right side window glass	(187)	Air bag compartment	(452)	Outside hardware (e.g.,
	other attachment	,,,,,,,	including one or more of the	,,,,,	cover-passenger side and	(102)	outside mirror, antenna)
0081	Cellular telephone or CB		following: frame, window		jewelry	(452)	
000,	• •		•	/1001	•	(433)	Other exterior surface or
	radio		sill, A (A1/A2)-pillar, B-pillar,	(100)	Air bag compartment		tires (specify):
009)	Add on equipment (e.g.,		or roof side rail.		cover-passenger side and		
	tape deck, air conditioner)	(110)	Other right side object		object held		
010)	Left instrument panel and		(specify):	(189)	Air bag compartment	(454)	Unknown exterior objects
	below				cover-passenger side and		
111	Center instrument panel and				object in mouth	EXTE	RIOR OF OTHER MOTOR
	below	INTER	IOR	(190)	Other air bag (specify)	VEHIC	CLE
12)	Right instrument panel and		Seat, back support				Front bumper
	below		Belt restraint	(10E)	Other air bag compartment	•	
1121		, 132)		(193)	•		Hood edge
	Glove compartment door		webbing/buckle		cover (specify)	(503)	Other front of vehicle
	Knee bolster	(153)	Belt restraint B-pillar or door				(specify):
)15)	Windshield including one or		frame attachment point				
	more of the following: front	(154)	Other restraint system	ROOF		(504)	Hood
	header, A (A1/A2)-pillar,		component (specify):	(201)	Front header	(505)	Hood ornament
	instrument panel, mirror, or			(202)	Rear header	(506)	Windshield, roof rail, A-pilla
	steering assembly (driver	(155)	Head restraint system	(203)	Roof left side rail		Side surface
	side only)		Other occupants (specify):		Roof right side rail		Side mirrors
16.	Windshield including one or	,,,,,,	Cinci Cacapanta (aposity)		Roof or convertible top		
		11611	Industrial Industrial	(205)	Noor or convertible top	(509)	Other side protrusions
	more of the following: front		Interior loose objects	-	_		(specify):
	header, A (A1/A2)-pillar,	(162)	Child safety seat (specify):	FLOO			
	instrument panel, or mirror				Floor (including toe pan)	(510)	Rear surface
	(passenger side only)	(163)	Other interior object	(252)	Floor or console mounted	(511)	Undercarriage
217)	Windshield reinforced by		(specify):		transmission lever, including	(512)	Tires and wheels
	exterior object (specify)				console	(513)	Other exterior of other
				(253)	Parking brake handle		motor vehicle (specify):
19)	Other front object (specify):	AIR BA	ve		Foot controls including		motor vormero (apoerry).
			Air bag-driver side	,,	parking brake		
			Air bag-driver side and		berring piere		
	IDF	. (171)	•			(514)	Unknown exterior of other
FT S			eyewear	REAR			motor vehicle
51)	Left side interior surface,	(172)	Air bag-driver side and	(301)	Backlight (rear window)		
	excluding hardware or		jewelry	(302)	Backlight storage rack,	OTHE	R VEHICLE OR OBJECT IN
	ermrests	(173)	Air bag-driver side and		door, etc.	THE E	NVIRONMENT
52)	Left side hardware or		object held	(303)	Other rear object (specify):		Ground
	armrest	(174)	Air bag-driver side and	•			Other vehicle or object
	Left A (A1/A2)-pillar		object in mouth			,0001	
	Left B-pillar	(175)	Air bag compartment	ADAM	TIVE (ASSISTIVE) DBN/N/C		(specify):
		1.731	•		TIVE (ASSISTIVE) DRIVING		
	Other left pillar (specify):	/470	Cover-driver side	EQUIP		(599)	Unknown vehicle or object
		(1/6)	Air bag compartment	(401)	Hand controls for		
	Left side window glass		cover-driver side and		braking/acceleration	NONC	ONTACT INJURY
57)	Left side window frame		eyewear	(402)	Steering control devices	(601)	Fire in vehicle
58) (Left side window sill	(177)	Air bag compartment		(attached to OEM steering	(602)	Flying glass
59) (Left side window glass		cover-driver side and jewelry		wheel)		Other noncontact injury
i	including one or more of the		Air bag compartment	(403)	Steering knob attached to		source
	following: frame, window		cover-driver side and object		Steering wheel		
	sill, A (A1/A2)-pillar, B-pillar,		held	(AOE)	-	100 **	(specify):
				(400)	Replacement steering wheel		Air bag exhaust gases
	or roof side rail.		Air bag compartment		(i.e., reduced diameter)	(697)	Injured, unknown source
	Other left side object		cover-driver side and object	(406)	Joy stick steering controls		
((specify):		in mouth	(407)	Wheelchair tie-downs		
_		(180)	Air bag-passenger side	(408)	Modification to seat belts,		
			Air bag-passenger side and	-	(specify):		
нт :	SIDE		eyewear	(409)	Additional or relocated		
	Right side interior surface,		•	, ,,,,,,,			
	•		Air bag-passenger side and		switches, (specify):		
	excluding hardware or		je welry				
	irmrests				Raised roof		





	CAUSE OF DEATH						
	ICD·9·CM						
		ICD / CM					
			•				
		OTHER DRUGS (GV16)					
Specia	men Test Type	Drug(s)	Drug Type				
	od and urine tests						
	od test only ine test only						
	her test						
Uns	specified						
		Medical Record Abbreviations					
Symbol		Record Type Description					
A		ation based upon an invasive examination of a body					
ME AR		d—where the information reported on the patient is based on a non-invasive exa ry—any medical information on this record should be considered as post-ER sin-					
	patient's admission; these	records are common in short hospitalizations and usually only contain: admiss reatments; ICD-9-CM codes are frequently available.	•				
FS	Admission/discharge face	sheet-face sheets are essentially the same as admission record/summaries and o	ontain the same types of				
DS	information as discussed Discharge summary—sho	rten history of a patient's hospitalization highlighting the patient's major injuries	s; this record is often				
os	Operative record-summs	ive of its author which in many cases is a consultant ry of a performed surgical operation often providing detailed information about					
		rgery are normally admitted; thus, this record is normally considered post-ER; it t surgery, then treat it as emergency-room related	nowever, if this record				
PX	Radiographic records—tal	ken after the patient has been admitted, or while in surgery or intensive care applemental record containing additional nurses notes taken after the patient's a	dmission				
PN HP	History and physical exam	n-medical history and the results of the physical exam obtained by the emergen	cy room physician as-				
CN	Consultation record—cons	narrival at the emergency room ultations are in essence additional history and physicial exams performed by do					
KR	requested by the emergency room physician; the consultation may occur during the emergency room visit or after admission Emergency room report—where the author of this information is undefined						
EN	Emergency room nurse-"nurse/complaint of" section on the emergency room report						
ED	gency room report)	"objective/physical exam" section plus "diagnosis and treatment" sections (i.e., d	octor poruon of emer-				
NN EX	• • •	d record containing additional notes taken by the emergency room nurse(s) ten during the patients stay in the emergency room					
CV	• • • • • • • • • • • • • • • • • • • •						
CR	Coroner's report-medical	information based upon a noninvasive examination performed by a person who	is not a doctor but who				
ET		ician-report by a person who qualifies as an emergency medical services technic					
0	Other source-medical inf	ormation based on an other source (e.g., newspaper, DVM–Doctor of Veterinar	y Medicine)				

Appendix N:

NASS CDS OCCUPANT ASSESSMENT FORM:

VEHICLE #2 DRIVER



U.S. Department of Transportation National Highway Traffic Safety

HS Form 433A (1/95)

OCCUPANT ASSESSMENT FORM

Form Approved O.M.B. No. 2127-0021

NATIONAL ACCIDENT SAMPLING SYSTEM CRASHWORTHINESS DATA SYSTEM

Administration	OCCUPANT'S SEATING
1. Primary Sampling Unit Number	1 /
2. Case Number - Stratum <u> 45 1 7</u>	10. Occupant's Seat Position//
3. Vehicle Number	(11) Left side (12) Middle
4. Occupant Number O	(13) Right side (14) Other (specify):
OCCUPANT'S CHARACTERISTICS	(15) On or in the lap of another occupant
5. Occupant's Age Code actual age at time of accident. (00) Less than one year old (specify by month): (97) 97 years and older (99) Unknown	Second Seat (21) Left side (22) Middle (23) Right side (24) Other (specify): (25) On or in the lap of another occupant
6. Occupant's Sex (1) Male (2) Female-not reported pregnant (3) Female-pregnant-1st trimester(1st-3rd month) (4) Female-pregnant-2nd trimester(4th-6th month) (5) Female-pregnant-3rd trimester(7th-9th month) (6) Female-pregnant-term unknown (9) Unknown	Third Seat (31) Left side (32) Middle (33) Right side (34) Other (specify): (35) On or in the lap of another occupant Fourth Seat (41) Left side (42) Middle (43) Right side (44) Other (specify):
7. Occupant's Height Code actual height to the nearest centimeter. (999) Unknown	(45) On or in the lap of another occupant (97) In or on unenclosed area (98) Other seat (specify): (99) Unknown
8. Occupant's Weight Code actual weight to the nearest kilogram. (999)Unknown 115 pounds X .4536 = 52 kilograms 9. Occupant's Role (1) Driver (2) Passenger (9) Unknown	11. Occupant's Posture (0) Normal posture Abnormal posture (1) Kneeling or standing on seat (2) Lying on or across seat (3) Kneeling, standing or sitting in front of seat (4) Sitting sideways or turned to talk with another occupant or to look out a rear window (5) Sitting on a console (6) Lying back in a reclined seat position (7) Bracing with feet or hands on a surface in front of seat (8) Other abnormal posture (specify): (9) Unknown

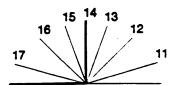
	EJECTION/ENTRAPMENT						
12.	Ejection (0) No ejection (1) Complete ejection (2) Partial ejection (3) Ejection, unknown degree (9) Unknown	٥	15. Medium Status (Immediately Prior To Impact) (O) No ejection (1) Open (2) Closed (3) Integral structure (9) Unknown				
13.	Ejection Area (0) No ejection (1) Windshield (2) Left front (3) Right front (4) Left rear (5) Right rear (6) Rear (7) Roof (8) Other area (e.g., back of pickup, etc.) (specify):	<u>o</u>	16. Entrapment (0) Not entrapped/exit not inhibited (1) Entrapped/pinned - mechanically restrained (2) Could not exit vehicle due to jammed doors, fire, etc. (specify):				
14.	Ejection Medium (0) No ejection (1) Door/hatch/tailgate (2) Nonfixed roof structure (3) Fixed glazing (4) Nonfixed glazing (specify): (5) Integral structure (8) Other medium (specify): (9) Unknown	<u>o</u>	(2) Removed from vehicle due to injuries (3) Exited vehicle with some assistance (4) Exited vehicle under own power (5) Occupant fully ejected (9) Unknown				

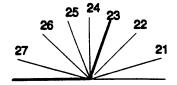
POLICE REPORTED RESTRAINT USE	AIR BAG SYSTEM FUNCTION
28. Police Reported Belt Use (0) None used (1) Police did not indicate belt use (2) Shoulder belt (3) Lap belt (4) Lap and shoulder belt (5) Belt used, type not specified (6) Child safety seat (7) Automatic belt (8) Other type belt, (specify):	30. Frontal Air Bag System Availability/Function (This Occupant Position) (0) Not equipped/not available (1) Air bag Non-functional (2) Air bag disconnected (specify): (3) Air bag not reinstalled (9) Unknown
(9) Police indicated "unknown" 29. Police Reported Air Bag Availability/Function (0) No air bag available (1) Police did not indicate air bag availability/function (2) Deployed (3) Not deployed (4) Unknown if deployed (9) Police indicated "unknown"	 31. Frontal Air Bag System Deployment (This Occupant Position) (0) Not equipped/not available (1) Deployed during accident (as a result of impact) (2) Deployed inadvertently just prior to accident (3) Deployed, details unknown (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical) (5) Unknown if deployed (7) Nondeployed (9) Unknown
Check the Primary Source Used In Determining Belt Use. [] Not equipped/not available/destroyed or rendered inoperative [] Vehicle inspection [] Official injury data [] Driver/occupant interview [] Other (specify): [] Unknown if belt used	32. Other Than First Seat Frontal Air Bag Availability/Function (This Occupant Position) (0) Not equipped/not available (1) Air bag Non-functional (2) Air bag disconnected (specify): (3) Air bag not reinstalled (9) Unknown Specify type of "other" air bag present:
	33. Air Bag(s) Deployment, Other Than First Seat Frontal (This Occupant Position) (0) Not equipped with an "other" air bag (1) Deployed during accident (as a result of impact) (2) Deployed inadvertently just prior to accident (3) Deployed, details unknown (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical) (5) Unknown if deployed (7) Nondeployed (9) Unknown 34. Are There Indications of Air Bag System Failure? (This Occupant Position) (0) Not equipped/not available (1) No (2) Yes (specify):

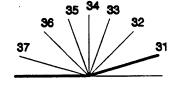
FIRST SEAT FRONTAL AIR	BAG SYSTEM EVALUATION
35. Had Vehicle Been in Previous Accident(s)? (0) Not equipped/not available (1) No previous accidents Yes (2) Previous accident(s) without deployment(s) (3) One previous accident with deployment (4) More than one previous accident with at least one deployment (8) Previous accidents, unknown deployment status (9) Unknown	40. Longitudinal Component of Delta V For Air Bag Deployment Impact (000) Not equipped/not available Code the value of the delta V for the impact that initiated the air bag deployment (996) Deployment, unknown longitudinal Delta V (997) Not deployed (998) Unknown if deployed (999) Unknown
36. Type of Air Bag (0) Not equipped/not available (1) Original manufacturer installed system (2) Retrofitted air bag (3) Replacement air bag (8) Unknown type of air bag (9) Unknown	41. Did Air Bag Module Cover Flap(s) Open At Designated Tear Points? (0) Not equipped/not available (1) No (2) Yes (3) Deployed, unknown if flap(s) opened at designated tear points (7) Not deployed (8) Unknown if deployed
37. Had Any Prior Maintenance/Service Been Performed On This Air Bag System? (0) Not equipped/not available (1) No prior maintenance (2) Yes, prior maintenance (specify): (9) Unknown 38. Air Bag Deployment Accident Event Sequence Number (00) Not equipped/not eveilable	(9) Unknown 42. Were Air Bag Module Cover Flap(s) Damaged? (0) Not equipped/not available (1) No (2) Yes (specify): (3) Deployed, unknown if air bag module cover flap(s) damaged (7) Not deployed (8) Unknown if deployed (9) Unknown
(00) Not equipped/not available Code the accident event sequence number that initiated the air bag deployment (96) Deployed, unknown event (97) Not deployed (98) Unknown if deployed (99) Unknown	43. Was There Damage To The Air Bag? (00) Not equipped/not available (01) Not damaged Yes - Air Bag Damage (02) Ruptured (03) Cut (04) Torn
39. CDC For Air Bag Deployment Impact (0) Not equipped/not available (1) Highest delta V (2) Second highest delta V (3) Other non-coded delta V (specify): (6) Deployed, unknown event (7) Not deployed (8) Unknown if deployed (9) Unknown	(05) Holed (06) Burned (07) Abraded (88) Other damage (specify): (95) Damaged, details unknown (96) Deployed, unknown if damaged (97) Not deployed (98) Unknown if deployed (99) Unknown

	FIRST SEAT FRONTAL AIR BAG SYSTEM	HE	AD RESTRAINT AND SEAT EVALUATION
	EVALUATION continued	40	Head Restraint Type/Damage by Occupant 3
44	Source of Air Bag Damage	43.	at This Occupant Position
 .	(00) Not equipped/not available		(0) No head restraints
	(O1) Not damaged		(1) Integral—no damage
	(02) Object worn by occupant, (specify):		(2) Integral—damaged during accident
			(3) Adjustable—no damage
	(03) Object carried by occupant, (specify):		(4) Adjustable—damaged during accident
	·		(5) Add-on—no damage
	(04) Adaptive/assistive controls, (specify):		(6) Add-on—damaged during accident
			(8) Other (specify):
	(05) Fire in vehicle		
	(06) Thermal burns		(9) Unknown
	(07) Rescue or emergency efforts		Same Time (Abia Converge Position)
	(88) Other damage source (specify):	50.	Seat Type (this Occupant Position) (00) Occupant not seated or no seat
	(95) Damaged, unknown source		(01) Bucket
	(96) Deployed, unknown if damaged		(02) Bucket with folding back
	(97) Not deployed		(03) Bench
	(98) Unknown if deployed		(04) Bench with separate back cushions
	(99) Unknown		(05) Bench with folding back(s)
			(06) Split bench with separate back cushions
	Man The Air Reg Tethered?		(07) Split bench with folding back(s)
45.	Was The Air Bag Tethered? (0) Not equipped/not available		(08) Pedestal (i.e., column supported)
	(1) No		(09) Box mounted seat (i.e., van type)
	(2) Yes (specify number of tether straps):	i	(10) Other seat type (specify):
	(2) les (spechy humber of totals, strape).		
	(3) Deployed, unknown if tethered		(99) Unknown
	(7) Not deployed		a control (Atta Consumer Projector)
	(8) Unknown if deployed	51.	. Seat Orientation (this Occupant Position)
	(9) Unknown	1	(0) Occupant not seated or no seat (1) Forward facing seat
46	Did The Air Bag Have Vent Ports?		(2) Rear facing seat
40.	(0) Not equipped/not available		(3) Side facing seat (inward)
	(1) No		(4) Side facing seat (outward)
	(2) Yes (specify number of vent ports):		(8) Other (specify):
Ì		1	
	(3) Deployed, unknown if vent ports present		(9) Unknown
ŧ .	(7) Not deployed		2
1	(8) Unknown if deployed	52	. Seat Track Adjusted Position Prior To Impact 2
	(9) Unknown		(0) Occupant not seated or no seat
١	At Bus in abia Occurrent's Basisian		(1) Non-adjustable seat track
47.	Was the Air Bag in this Occupant's Position	l	Adiustable Cost Track
1	Contacted by Another Occupant? (0) Not equipped/not available		Adjustable Seat Track (2) Seat at forward most track position
	(1) No		(3) Seat between forward most and middle track
	(1) No (2) Yes (specify):		positions
		1	(4) Seat at middle track position
	(3) Deployed, unknown if other occupant contact		(5) Seat between middle and rear most track
1	to air bag		positions
1	(7) Not deployed	1	(6) Seat at rear most track position
l	(8) Unknown if deployed	1	(9) Unknown
l	(9) Unknown	1	
48.	Was This Occupant Wearing Eye-wear?		
	(0) Not equipped/not available	1	
	(1) No		
	(2) Eyeglasses/sunglasses		
1	(3) Contact lenses		
	(4) Deployed, unknown if eyewear worn(7) Not deployed	1	
	(8) Unknown if deployed	1	
1	(9) Unknown		
1	13) CHRIUTH	1	

	HEAD RESTRAINT AND SE	AT EVALUATION continued
53.	Seat Back Incline Prior and Post Impact (00) Occupant not seated or no seat (01) Not adjustable	
	Upright prior to impact (11) Moved to completely rearward position (12) Moved to rearward midrange position (13) Moved to slightly rearward position (14) Retained pre-impact position (15) Moved to slightly forward position (16) Moved to forward midrange position (17) Moved to completely forward position	15 14
	Slightly reclined prior to impact (21) Moved to completely rearward position (22) Moved to rearward midrange position (23) Retained pre-impact position (24) Moved to upright position (25) Moved to slightly forward position (26) Moved to forward midrange position (27) Moved to completely forward position	25 ²⁴ 26 27
	Completely reclined prior to impact (31) Retained pre-impact position (32) Moved to rearward midrange position (33) Moved to slightly rearward position (34) Moved to upright position (35) Moved to slightly forward position (36) Moved to forward midrange position (37) Moved to completely forward position	35 34 36 37
	(99) Unknown	
54.	Seat Performance (this Occupant Position) (0) Occupant not seated or no seat (1) No seat performance failure(s) (2) Seat adjusters failed (3) Seat back folding locks or "seat back" failed	
	(specify): (4) Seat track/anchors failed	
	(5) Deformed by impact of occupant(6) Deformed by passenger compartment intrusion, (specify):	
	(7) Combination of above (specify):	
	(8) Other (specify):(9) Unknown	
I		I







	CH	IILD SAF	ETY	SEA	T/		
55.		00	58.	Child	Safety Seat Harness U	sage <u></u>	20
	(000) No child safety seat Applicable codes are found in your NASS 0	ne					_
	Data Collection, Coding and Editing		59.	Child	Safety Seat Shield Usa	ige (<u> </u>
	(950) Built-in child safety seat				•		
	(997) Other make/model (specify):		60	CF:14	Safety Seat Tether Us		00
	(998) Unknown make/model		υ.	Child	Salety Seat Tetrier Os	age	
	(999) Unknown if child safety seat used			Note:	Options below applica	ble to	
					bles OA58-OA60.		
	Town of Child Cofeen Cont	0		(00)	No child safety seat		
56.	Type of Child Safety Seat (0) No child safety seat	_		Not E	Designed With Harness/	Shield/Tether	
	(1) Infant seat				After market harness/s		
	(2) Toddler seat	İ			added, not used	history of the same	_
	(3) Convertible seat				After market harness/s Child safety seat used,		
	(4) Booster seat - with shield (5) Booster seat - without shield			(03)	harness/shield/tether a		arket
	(7) Other type child safety seat (specify):			(09)	Unknown if harness/sh		
					added or used		
	(8) Unknown child safety seat type (9) Unknown if child safety seat used			Desin	ned With Harness/Shie	ld/Tether	
	(5) Offkhown if Child Safety Seat used			_	Harness/shield/tether n		
				,,	Harness/shield/tether u		
57.	Child Safety Seat Orientation (00) No child safety seat	00		(19)	Unknown if harness/sh	ield/tether used	
	•				own If Designed With I		Tether
	Designed for Rear Facing for This Age/Wei	ght			Harness/shield/tether n		
	(01) Rear facing (02) Forward facing				Harness/shield/tether u Unknown if harness/sh		
	(08) Other orientation (specify):			(20)			·
				(99)	Unknown if child safet	y seat used	
	(09) Unknown orientation					·	
	Designed For Forward Facing for This Age	Weight					
	(11) Rear facing (12) Forward facing						
	(18) Other orientation (specify):						
	(19) Unknown orientation						
	Unknown Design or Orientation For This						
	Age/Weight, or Unknown Age/Weight (21) Rear facing						
	(22) Forward facing						
	(28) Other orientation (specify):						
	(29) Unknown orientation						
	(99) Unknown if child safety seat used						

Nationa	al Accident Sampling System-Crashworthiness Dat	ta System: Occupant Assessment Form	F	Page 9		
	INJURY CONSEQUENCES					
(0 (1 (2 (3 (4 (5 (6	jury Severity (Police Rating) O - No injury C - Possible injury D B - Nonincapacitating injury C A - Incapacitating injury C K - Killed U - Injury, severity unknown D Died prior to accident Unknown	(0) Not treated at a medical facility (1) Trauma center (2) Hospital (3) Medical clinic (4) Physician's office (5) Treatment later at medical facility (8) Other (specify):				
(0 (1 (2) No treatment) Fatal) Fatal - ruled disease (specify):	63. Type Of Medical Facility (for Initial Treatment) (0) Not treated at a medical facility (1) Trauma center (2) Hospital (3) Medical clinic (4) Physician's office (5) Treatment later at medical facility (8) Other (specify): (9) Unknown 64. Hospital Stay (00) Not Hospitalized Code the number of days (up through 60 that the occupant stayed in hospital. (61) 61 days or more (99) Unknown 65. Working Days Lost Code the number of days (up through 60) that the occupant lost from work due to the accident (00) No working days lost	h 60) ,		
(3 (4 (5 (6 (7	Hospitalization Transported and released Treatment at scene - nontransported Treatment later Treatment - other (specify): Transported to a medical facility-unknown if treated Unknown	Code the number of days (up through 60) that the occupant lost from work due to the accident (00) No working days lost (61) 61 days or more (62) Fatally injured (97) Not working prior to accident (99) Unknown	0	<u>o</u>		
	VARIABI	ES 66-74				
	TO BE CODED BY	THE ZONE CENTER				

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TO BE CODED BY THE ZONE CENTER

INJURY CONSEQUENCES	TRAUMA DATA
66. Time to Death Code number of hours from time of accident to time of death up through 24 hours. If time of death is greater than 24 hours, code number of days. (Note: 1 day 31, 2 days = 32, n days = 30 + n up through 30 days = 60) (OO) Not fatal (96) Fatal - ruled disease (99) Unknown	y = (02) No GCS Score at medical facility
67. 1st Medically Reported Cause of Death 68. 2nd Medically Reported Cause of Death 69. 3rd Medically Reported Cause of Death Code the Occupant Injury from line number(s) for the medically reported injury(s) which reportedly contributed to this occupant's death (00) Not fatal or no additional causes (96) Mode of death given but specific injuries are not linked to cause of death. (specify):	72. Was the Occupant Given Blood? (1) No - blood not given (2) Yes - blood given (specify units): (9) Unknown if blood given 73. Arterial Blood Gases (ABG) – HCO ₃ (00) Not injured (01) Injured, ABGs not measured or reported (02-50) Code the actual value of the HCO ₃ (96) ABGs reported , HCO ₃ unknown (97) Injured, details unknown (99) Unknown if injured
(97) Other result (includes fatal ruled disease) (specify):	BELT USE DETERMINATION
70. Number of Recorded Injuries for This Occupant Code the actual number of injuries recorded for this occupant. (00) No recorded injuries (97) Injured, details unknown (99) Unknown if injured	74. Primary Source of Belt Use Determination (0) Not equipped/not available/destroyed or rendered inoperative (1) Vehicle inspection (2) Official injury data (3) Driver/occupant interview (8) Other (specify): (9) Unknown if belt used

Appendix O:

NASS CDS OCCUPANT INJURY FORM:

VEHICLE #2 DRIVER



U.S. Department of Transportation

National Highway Traffic Safety Administration

OCCUPANT INJURY FORM

Form Approved O.M.B. No. 2127-0021

NATIONAL ACCIDENT SAMPLING SYSTEM CRASHWORTHINESS DATA SYSTEM

Injury

1. Primary Sampling Unit Number

 $\frac{10}{10}$

3. Vehicle Number

02

2. Case Number - Stratum

9517

A.I.S. - 90

4. Occupant Number

0/

Occupant

INJURY DATA

Record below the actual injuries sustained by this occupant that were identified from the official and unofficial data sources. Remember not to double count an injury just because it was identified from two different sources. If greater than ten injuries have been documented, encode the balance on the Occupant Injury Supplement.

		Source of Injur Data			of Speci mic Anato	mic Lev	el of A.I. ury Seve		Injury Source	Source Confidence Level	Direct/ Indirect Injury	Area Intrusion Number
Abr	asion high	c _{5.} _7	6. <u>8</u>	7. <u>9</u>	8. <u>O</u>	2 9. <u>0</u>	2 10/	11.2 1	2.004	13.2	14. / 1	5. <u>0 0</u>
	2nd	16	17	18	19	20	21	222	3	24	25 20	6
	3rd	27	28	29	30	31	32	_ 33 3	4.	35	36 3	7
	4th	38	39	40	41	42	43	44 4	5. <u> </u>	46	47 48	B
	5th	49	50	51	52	53	54	55 5	6	57	58 59	ə
	6th	60	61	62	63	64	65	666	7	68	59 70	o
	7th	71	72	73	74	75	76	77 7) (1 (4) (1 (4) (4) (4) (4) (4) (4) (4) (4) (4) (4)	79	80. <u> </u>	1. <u></u>
	8th	82	83	84	85	86	87	88 8	9	90 9	91 92	2
	9th	93	94	95	96	_ 97	98	99 100)1	01 10	02 103	B
	10th 1	104	105	106	107	_ 108	109	110 11	1 1	12 1	13 114	·
												ł

				occi	JPANT (INJURY	DATA				
	Source of Injury Data	Body Region	Type of Anatomic Structure	A.I.S 90 Specific Anatomic Structure	Level of Injury	A.I.S. Severity	Aspect	Injury Source	Injury Source Confidence Level	Direct/ Indirect Injury	Occupant Area Intrusion Number
11th											
12th						_			_	 .	
13th	_					_	_		_	_	
14th	_	_									
15th	_						_		_		
16th	-										
17th			_				_		_	-	
18th				 -							
19th							_				
20th	_		_				_				
21 s t											1
22nd	 -									_	
23rd	_					_			· —	_	
24th							-				
25th											

OCCUPANT INJURY CLASSIFICATION

Body Region Head (1) (2)Face (3) Neck (4)Thorax (5) Abdomen (6)Spine **Upper Extremity** (7)(8) Lower Extremity (9) Unspecified

Type of Anatomic Structure

- (1) Whole Area (2) Vessels
- (3) Nerves
- (4) Organs (includes Muscles/ligaments)
- (5) Skeletal (includes joints)

SOURCE OF INJURY DATA

(6) E.M.S. personnel(7) Interviewee

(9) Police

(8) Other source (specify):

- (6) Head LOC
- (9) Skin

Specific Anatomic Structure

Vessels, Nerves, Organs.
Bones, Joints are assigned consecutive two digit numbers beginning with 02.

The exceptions to this rule apply to:

Whole Area (02) Skin - Abrasion (04) Skin - Contusion (06) Skin - Laceration (08) Skin - Avulsion (10) Amputation

- (20) Burn (30) Crush
- (40) Degloving (50) Injury - NFS
- (90) Trauma, other than mechanical

Head - LOC (02) Length of LOC

- (04) Level (06) of
- (08) Consciousness
- (10) Concussion

<u>Spine</u>

- (02) Cervical (04) Thoracic
- (06) Lumbar

Level of Injury

Specific injuries are assigned consecutive two-digit numbers beginning with 02.

To the extent possible, within the organizational framework of the AIS, 00 is assigned to an injury NFS as to severity or where only one injury is given in the dictionary for that anatomic structure. 99 is assigned to any injury NFS as to lesion or severity.

Abbreviated Injury Scale

- (1) Minor Injury
- (2) Moderate Injury
- (3) Serious Injury
- (4) Severe Injury
- (5) Critical Injury (6) Maximum
- (6) Maximum (untreatable)
- (7) Injured, unknown severity

Aspect

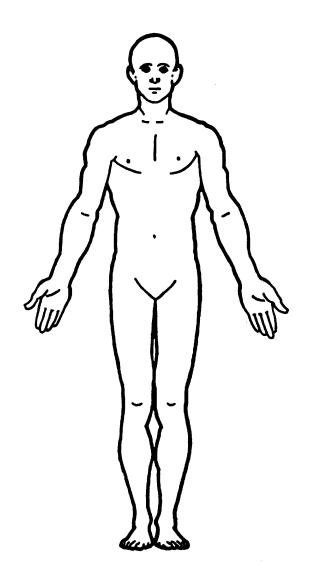
- (1) Right
- (2) Left
- (3) Bilateral
- (4) Central
- (5) Anterior
- (6) Posterior
- (7) Superior
- (8) Inferior

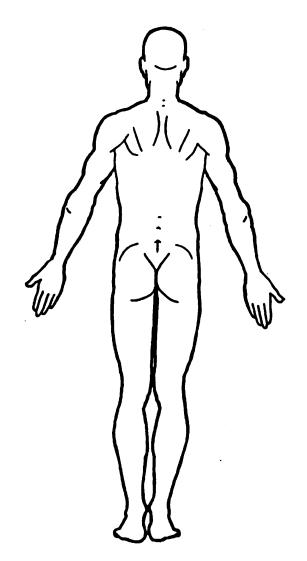
DIRECT/INDIRECT INJURY

- (9) Unknown
- (0) Whole region

CONFIDENCE LEVEL **OFFICIAL RECORDS** (1) Autopsy records with or (1) Certain (1) Direct contact injury without hospital/medical (2) Probable (2) Indirect contact injury records (3) Possible (3) Noncontact injury (2) Hospital/medical records other (9) Unknown Injured, unknown source than emergency room (e.g., discharge summary) (3) Emergency room records only (including associated X-rays or other lab reports) (4) Private physician, walk-in or emergency clinic **UNOFFICIAL RECORDS** (5) Lay coroner report

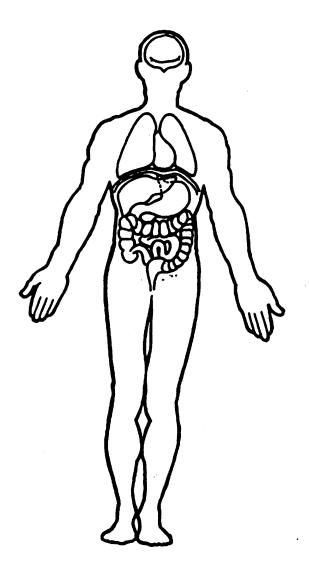
INJURY SOURCE

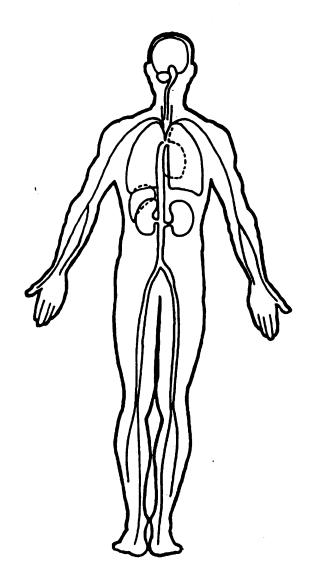




	OFFICIAL INJURY DATA — SKELETAL INJURIES
Restrained? No Yes	Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)
Blood Alcohol Level (mg/dl) BAL =	
Glasgow Coma Scale Score GCSS =	
Units of Blood Given Units =	
Arterial Blood Gases pH = PO ₂ =	
PCO ₂	

			INJURY	sou	RCES		
FRON	ıπ	(102)	Right side hardware or	(183	Air bag-passenger side and	(411) Wall mounted head rest
(001)	Windshield		armrest		object held		(used behind wheel chair)
(002)	Mirror	(103)	Right A (A1/A2)-pillar	(184)	Air bag-passenger side and	(412) Other adaptive device
(003)	Sunvisor	(104)	Right B-pillar		object in mouth		(specify):
(004)	Steering wheel rim	(105)	Other right pillar (specify):	(185)	Air bag compartment		
(005)	Steering wheel hub/spoke				cover-passenger side		
(006)	Steering wheel (combination	(106)	Right side window glass	(186)	Air bag compartment	EXTE	RIOR of OCCUPANT'S
	of codes 004 and 005)		Right side window frame		cover-passenger side and	VEHI	
(007)	Steering column,	(108)	-		eyewear	(451) Hood
	transmission selector lever,		Right side window glass	(187)	Air bag compartment		Outside hardware (e.g.,
	other attachment		including one or more of the		cover-passenger side and	, , , ,	outside mirror, antenna)
(008)	Cellular telephone or CB		following: frame, window		jewelry	(453)	Other exterior surface or
	radio		sill, A (A1/A2)-pillar, B-pillar,	(188)	Air bag compartment	, ,,,,,,	tires (specify):
(009)	Add on equipment (e.g.,		or roof side rail.		cover-passenger side and		
	tape deck, air conditioner)	(110)	Other right side object		object held		
(010)	Left instrument panel and	,,,,,,	(specify):	(189)	Air bag compartment	(454)	Unknown exterior objects
	below		(Space: 4).	,,,,,,	cover-passenger side and	(454)	CHRIDWII EXTERIOR ODJECTS
(011)	Center instrument panel and				object in mouth	EYTE	RIOR OF OTHER MOTOR
	below	INTER	NOR	(190)	Other air bag (specify)	VEHI	
(012)	Right instrument panel and	_	Seat, back support	, 1301	en ned (sherita)		Front bumper
	below		Belt restraint	/10E	Other air bag compartment	•	• •
(013)	Glove compartment door	,	webbing/buckle	(183)	cover (specify)		Hood edge Other front of vehicle
	Knee boister	(153)	Belt restraint 8-pillar or door		COAR (SPECILA)	(503)	
• • • •	Windshield including one or	(100)	frame attachment point				(specify):
(0.5)	more of the following: front	/15A\	•	BOOF			
	header, A (A1/A2)-pillar,	(134)	Other restraint system	ROOF			Hood
	•		component (specify):		Front header		Hood ornament
	instrument panel, mirror, or	/4551		•	Rear header		Windshield, roof rail, A-pillar
	steering assembly (driver		Head restraint system		Roof left side rail		Side surface
(01)	side only)	(160)	Other occupants (specify):		Roof right side rail		Side mirrors
(016)	Windshield including one or			(205)	Roof or convertible top	(509)	Other side protrusions
	more of the following: front		Interior loose objects		_		(specify):
	header, A (A1/A2)-pillar,	(162)	Child safety seat (specify):	FLOOI			
	instrument panel, or mirror	(100)			Floor (including toe pan)	_	Rear surface
1017	(passenger side only)	(163)	Other interior object	(252)	Floor or console mounted	(511)	Undercarriage
(017)	Windshield reinforced by		(specify):		transmission lever, including		Tires and wheels
	exterior object (specify)				console	(513)	Other exterior of other
				(253)	Parking brake handle		motor vehicle (specify):
(019)	Other front object (specify):	AIR BA	· ·	(254)	Foot controls including		
			Air bag-driver side		parking brake		
		(171)	Air bag-driver side and			(514)	Unknown exterior of other
LEFT S			eAemest	REAR			motor vehicle
(051)	Left side interior surface,	(172)	Air bag-driver side and	(301)	Backlight (rear window)		
	excluding hardware or		jewelry	(302)	Backlight storage rack,	OTHE	R VEHICLE OR OBJECT IN
	armrests	(173)	Air bag-driver side and		door, etc.	THE E	NVIRONMENT
(052)	Left side hardware or		object held	(303)	Other rear object (specify):	(551)	Ground
	armrest	(174)	Air bag-driver side and	•		(598)	Other vehicle or object
(053)	Left A (A1/A2)-pillar		object in mouth				(specify):
	Left B-pillar	(175)	Air bag compartment	ADAP	TIVE (ASSISTIVE) DRIVING	٠	
(055)	Other left piller (specify):		cover-driver side	EQUIP	MENT	(599)	Unknown vehicle or object
		(176)	Air bag compartment	(401)	Hand controls for		•
(056)	Left side window glass		cover-driver side and		braking/acceleration	NONC	ONTACT INJURY
(057)	Left side window frame		eyewear	(402)	Steering control devices		Fire in vehicle
(058)	Left side window sill	(177)	Air bag compartment		(attached to OEM steering		Flying glass
(059)	Left side window glass		cover-driver side and jewelry		wheel)		Other noncontact injury
	including one or more of the	(178)	Air bag compartment	(403)	Steering knob attached to		source
	following: frame, window		cover-driver side and object		steering wheel		(specify):
	sill, A (A1/A2)-pillar, B-pillar,		held		Replacement steering wheel	(604)	Air bag exhaust gases
	or roof side rail.	(179)	Air bag compartment		(i.e., reduced diameter)		Injured, unknown source
(060)	Other left side object		cover-driver side and object		Joy stick steering controls		,. ,.,
	(specify):		in mouth		Wheelchair tie-downs		
			Air bag-passenger side		Modification to seat belts,		
			Air bag-passenger side and		(specify):		
RIGHT :	SIDE		eyewear		Additional or relocated		
	Right side interior surface,		Air bag-passenger side and		switches, (specify):		
(101)	•		. · · · · · · · · · · · · · · · · · · ·				
	excluding hardware or		le men A				
•	excluding hardware or errors		jewelry	(410)	Raised roof		





		CAUSE OF	DEATH			
		I CD 0	CD 4			
		ICD·9	·CM			
		· ·	• .			
						I
		·				
		OTHER DRUG	is (GV16)			
Speci	men Test Type	Di	rug(s)		Drug Type	
	od and urine tests					
	od test only ne test only					
	ner test specified					
011	specificu	·		ĺ		
						ı
						1
						┛
0 . 1		Medical Record				
Symbol A		Record Type I				\dashv
ME AR	Medical examiner's recor	rd—where the information reported on ary—any medical information on this r	the patient is based on a non-			
		e records are common in short hospita reatments; ICD-9-CM codes are frequ		tain: admissio	on DX(s), final DX(s),	
FS	Admission/discharge face information as discussed	sheet-face sheets are essentially the s above	name as admission record/sum	maries and co	ntain the same types of	
DS	written from the perspect	rten history of a patient's hospitalizati tive of its author which in many cases	is a consultant			
os	Operative record-summe	ary of a performed surgical operation rgery are normally admitted; thus, thi	often providing detailed inform			
PX	Radiographic records-tal	it surgery, then treat it as emergency- ken after the patient has been admitte	d, or while in surgery or inter	sive care		
IN HP		pplemental record containing addition n—medical history and the results of the				
CN		n arrival at the emergency room sultations are in essence additional his	tory and physicial exams perfo	ormed by doct	ors whose expertise was	
KR		cy room physician; the consultation newhere the author of this information is	· · · · · · · · · · · · · · · · · · ·	cy room visit o	or after admission	
ED ED		"nurse/complaint of" section on the en "objective/physical exam" section plus		ctions (i.e., do	ctor portion of emer-	
NN	gency room report)	ıl record containing additional notes to				
EX:	.	ken during the patients stay in the eme ent of cause of death for legal specific	-	be exercised	to ascertain the creden-	
	tials of the verdict's author	or. I information based upon a noninvasiv	ve examination performed by a	a person who	is not a doctor but who	
CR	•					
CR ET O	has the title of a coroner Emergency medical techn	ician—report by a person who qualifie ormation based on an other source (e.	• •			

TRANSPORTATION RESEARCH CENTER

Indiana University
Bloomington, Indiana 47403-1599

ON-SITE AIR BAG INVESTIGATION SELECTED PHOTOGRAPHS

CASE NO. - 95-17
FLEET - LEASED VEHICLE
LOCATION TEXAS
ACCIDENT DATE 1995

A total of eighty color copies of photographs are presented and referenced as Photograph #01 through Photograph #80. Photographs numbered #29, #34, #52, #53, and #54 were taken and made available by the Case Vehicle Owner's Engineering Firm. The remainder of these photographs were taken by the Transportation Research Center; NOTE: the case vehicle's driver and right front passenger air bags had been removed prior to this contractor's inspection of the vehicle.



Contract Number: DTNH22-94-D-17058

Prepared for:

U.S. Department of Transportation
National Highway Traffic Safety Administration
National Center for Statistics and Analysis
Washington, D.C. 20590



01 -- Case Vehicle's westward travel path in inside through lane approximately 50 meters (165 feet) east of impact



02 -- Case Vehicle's westward travel path in inside through lane approximately 30 meters (99 feet) east of impact



03 -- Case Vehicle's westward travel path in inside through lane approximately 15 meters (50 feet) east of impact



04 - Case Vehicle's westward travel path in inside through lane approximately 3 meters (10 feet) east of impact



05 -- Eastward view of Case Vehicle's westward travel path in inside through lane from area of impact in intersection



06 - Vehicle #2's southward travel path in southbound lane approximately 50 meters (165 feet) north of impact



07 -- Vehicle #2's southward travel path in southbound lane approximately 20 meters (66 feet) north of impact



08 -- Vehicle #2's southward travel path in southbound lane approximately 3 meters (10 feet) north of impact



09 -- Vehicle #2's southward travel path in southbound lane just prior to impact



10 - Vehicle #2's southwestward post-impact path of travel; NOTE: final rest position was near center median facing east-southeast



11 -- Vehicle #2's final rest position near center of median heading east-southeast; NOTE: vehicle rotated counterclockwise from impact to rest



12 -- Northeast view from vehicle #2's final rest position of southward travel path and glass debris near median most likely from driver's window



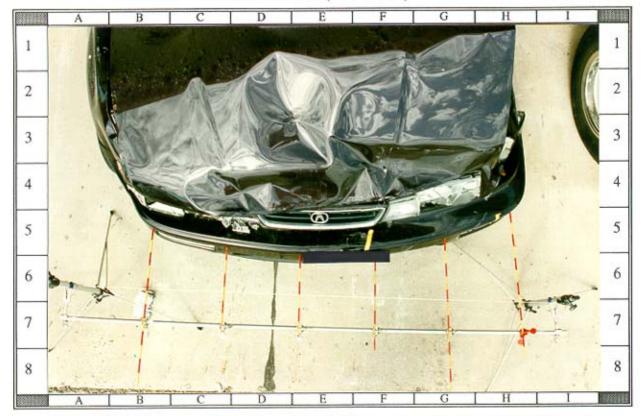
13 -- Case Vehicle's damaged front without contour gauge; NOTE: direct damage is essentially across entire front



14 - Case Vehicle's damaged front with contour gauge present; NOTE: slight shift of front end to left (toward right edge of photo)



15 -- Close-up of direct damage to Case Vehicle's front left bumper; NOTE: Vehicle #2's left front wheel rim mark (cell G6--G7)



16 -- Overhead view of frontal crush to Case Vehicle with contour gauge present; NOTE: maximum crush occurs @ C₁ (see cell H5)



17 -- Case Vehicle's damaged front end viewed from approximately 45 degrees left of front with contour gauge present



18 -- Reference line view of Case Vehicle's left side from front showing front left corner damage and slight leftward end shift



19 -- Reference line view of Case Vehicle's front damage from left with contour gauge present showing crush measurements



20 -- Case Vehicle's undamaged left side and left rear viewed from approximately 45 degrees left of back



21 -- Case Vehicle's undamaged back viewed from approximately 45 degrees left of back



22 -- Reference line view of Case Vehicle's undamaged back from right also showing undamaged right rear



23 -- Case Vehicle's holed right windshield; NOTE: windshield holed from right front passenger's head contact



24 -- Close-up view of Case Vehicle's holed right windshield; NOTE: windshield holed from right front passenger's head contact



25 -- Reference line view of Case Vehicle's front damage from right with contour gauge present showing right front corner damage



26 -- Reference line view of Case Vehicle's right side from front showing front right corner damage and slight leftward end shift



27 -- Case Vehicle's damaged front viewed from approximately 45 degrees right of front; NOTE: induced damage to right fender and holed windshield



28 -- Close-up of direct damage to Case Vehicle's front right bumper with contour gauge present



29 -- Case Vehicle's front seating areas viewed from left showing deployed driver and right front passenger air bags



30 -- Interior surface of Case Vehicle's driver door and dash contacted by driver's left knee; NOTE: air bag removed from steering column hub



31 -- Close-up of Case Vehicle's left dash, instrument panel, and steering wheel hub; NOTE: removed driver's air bag



32 -- Case Vehicle's driver seating area, center dash and console, header, and rearview mirror viewed from center rear seat; NOTE: removed air bag



33 -- Case Vehicle's undeformed steering wheel rim viewed from right; NOTE: no evidence of contact to driver's door surface or left A-pillar



34 -- Case Vehicle's front seating areas viewed from left showing deployed driver and right front passenger air bags



35 -- Case Vehicle's front dash and seating area; NOTE: right dash contacts, adjustable shoulder restraint, and removed right front air bag module



36 -- Case Vehicle's contacted right front knee bolster and glovebox; NOTE: yellow tape indicates contact areas



37 -- Close-up of contact scuffs to Case Vehicle's removed glovebox door



38 -- Case Vehicle's holed windshield on right, noncontacted right A-pillar, contacted knee bolster and glovebox, and removed right front air bag module



39 -- Close-up of Case Vehicle's holed right windshield; windshield holed by right front passenger's head



40 - Case Vehicle's rear seating area showing obvious contacts to right front seatback; NOTE: driver claims rear passenger was seated in position "21"



41 -- Case Vehicle's rear seating area from right; NOTE: outboard three-point belts and adjustable head restraints



42 -- Case Vehicle's rear seating area from left showing seatback knee contacts; NOTE: lack of space behind driver's seat--position "21" (see Photo #40)



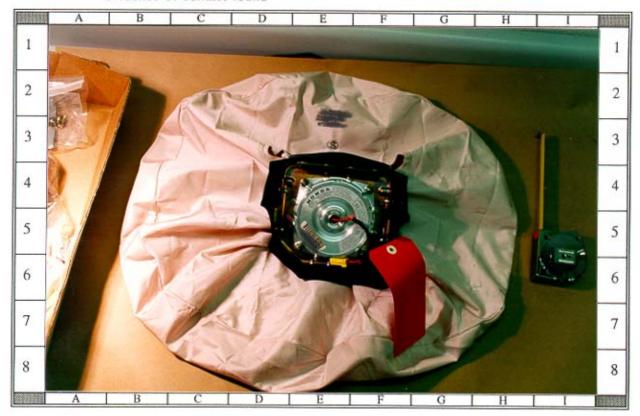
43 -- Case Vehicle's removed driver air bag with lipstick transfer ("P") from driver



44 -- Case Vehicle's removed driver air bag and top cover flap; NOTE: no evidence of contact found



45 -- Case Vehicle's removed driver air bag and bottom cover flap; NOTE: no evidence of contact found



46 -- Case Vehicle's removed driver air bag and inflator module viewed from behind



47 -- Case Vehicle's removed right front air bag showing four cuts in bag material ("M","H","N", and "E") most likely from windshield glass



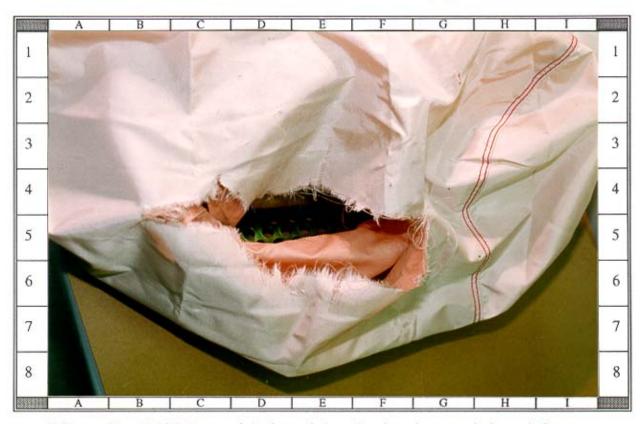
48 -- Closer-up of Case Vehicle's removed right front air bag showing cuts in material ("E" and "H"); NOTE: tear in bag at bottom of photograph



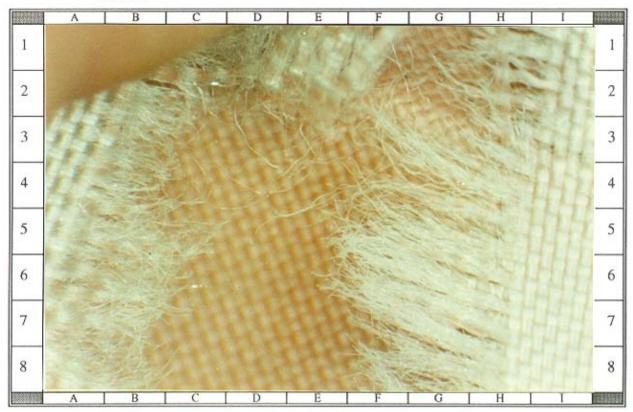
49 -- Case Vehicle's torn right front air bag; NOTE: tear located in bottom portion of air bag along fold lines



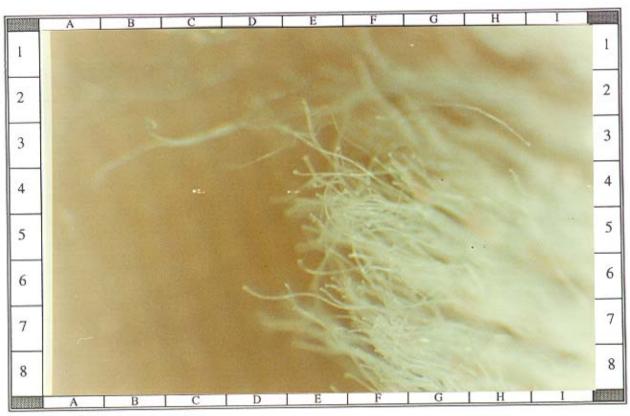
50 -- Case Vehicle's torn right front air bag showing length to be approximately 34 centimeters (13.4 inches)



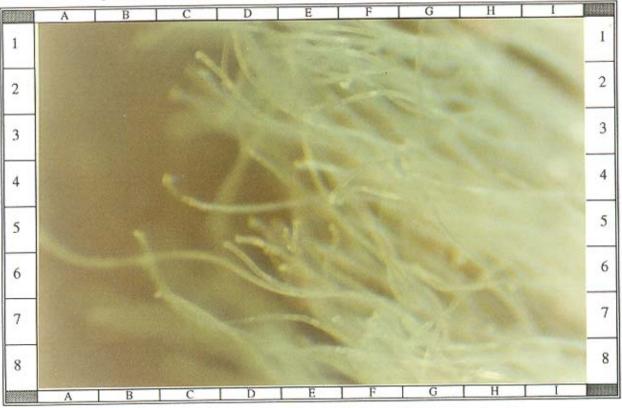
51 -- Case Vehicle's torn right front air bag showing close proximity to inflator module



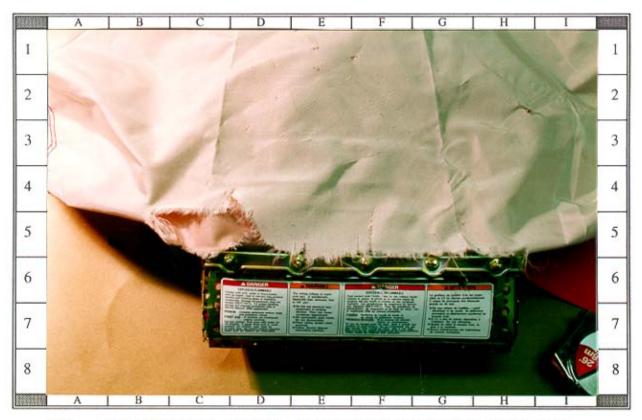
52 -- Close-up of fibers from Case Vehicle's torn right front air bag showing singeing



53 -- Microscopic close-up of mushroomed (singed) fibers from Case Vehicle's torn right front air bag



54 -- Closer microscopic view of mushroomed (singed) fiber ends from Case Vehicle's torn right front air bag



55 -- Case Vehicle's torn right front air bag shown next to the inflator; inflator module mounting screws caused tear



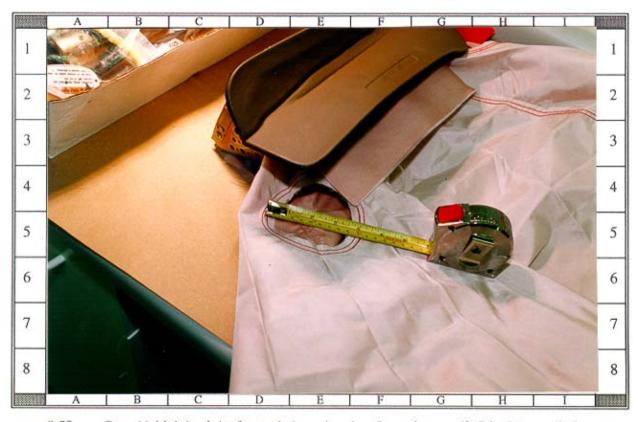
56 -- Case Vehicle's torn right front air bag showing that the tear marks originated from the screws on inflator module



57 -- Case Vehicle's torn right front air bag showing that the origins of the tear occurred along the folding pattern lines



58 -- Case Vehicle's right front air bag viewed from top; NOTE: no evidence of contact to top cover flap and no cuts or tears



59 -- Case Vehicle's right front air bag showing 9 centimeter (3.5 inch) vent holes



60 -- Case Vehicle's removed right front air bag inflator components



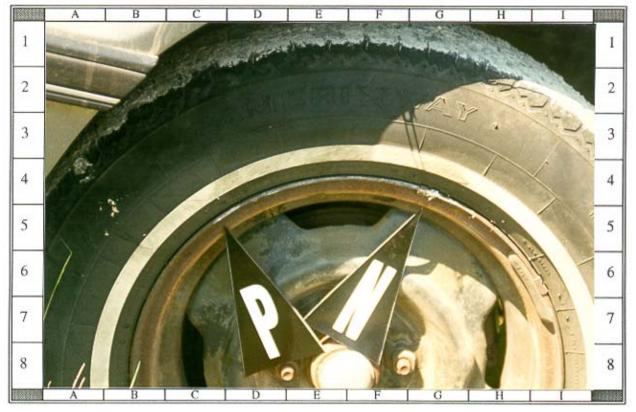
61 — Vehicle #2's undamaged front and damaged left side viewed from approximately 30 degrees left of front



62 -- Vehicle #2's damaged left side with stringline present viewed from approximately 45 degrees left of front



63 -- Direct damage to Vehicle #2's left front wheel rim ("N" and "P") and fender ("H") begins 17 centimeters (6.7 inches) behind axle



64 -- Close-up of Vehicle #2's direct damage to left front wheel rim; NOTE: scraping to rim between "P" and "N"



65 -- Vehicle #2's damaged left side; NOTE: direct damage goes from left front wheel rim ("P" and "N") rearward to B-pillar ("E" and "L")



66 -- Close-up of Vehicle #2's area of maximum crush @ C₄ (see cells G5--G6); NOTE: tape on stringline represents location of crush measurements



67 -- Vehicle #2's damaged left side viewed from approximately 60 degrees left of back; NOTE: marker "N" @ left rear door shows spurious damage area



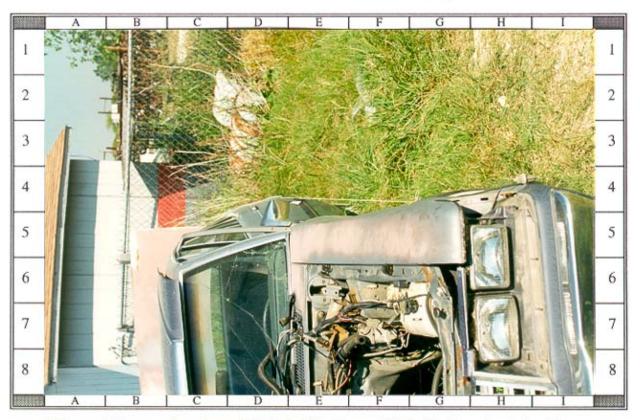
68 -- Close-up of Vehicle #2's spurious damage to left rear door area, possibly occurring in salvage yard



69 - Vehicle #2's damaged left side viewed from approximately 45 degrees left of back



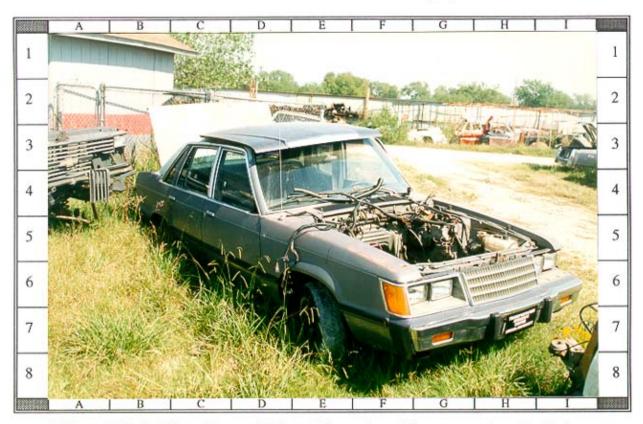
70 -- Reference line view of Vehicle #2's damaged left side from back showing crush profile



71 -- Reference line view of Vehicle #2's damaged left side from front showing crush profile



72 - Vehicle #2's undamaged back and right side viewed from approximately 60 degrees right of back; NOTE: back parts removed for salvage



73 -- Vehicle #2's undamaged right and front viewed from approximately 45 degrees right of front



74 -- Vehicle #2's driver seating area, instrument panel, and dash view from outside driver window; NOTE: intrusion to driver's dash (see cells A3--B4)



75 -- Close-up of Vehicle #2's driver seating area showing lack of contact evidence; NOTE: lower door panel intrusion



76 -- Vehicle #2's driver and right front passenger seating area viewed from outside right front door



77 -- Vehicle #2's rear passenger seating area viewed from outside right rear door; NOTE: intrusion to left lower B-pillar and door panel



78 -- Close-up of Vehicle #2's left rear passenger door intrusion and deformed arm rest on door



79 -- Close-up of intrusion to Vehicle #2's left B-pillar



#80 -- Close-up view of intrusion to Vehicle #2's driver door panel, left dash, and left kick panel